

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager 5-25-23.

NPM V NABS NR 1 Z D7S V NABS GR 77.

4-5390

1025 eight pm report weather part cloudy baro thirty ten wind southeast force three sea heavy swells stop continued unfavorable wind and sea conditions prevented landing Adams Bay stop Reconnaissance in surf boat showed heavy sea running off landing and big surf pounding directly into bay stop Tanager anchored in partial lee off cliffs forming western coast line of Island stop unless weather shows signs of improvement Tanager will proceed Honolulu tomorrow May twentysixth signed King 2090.

U. S. NAVAL COMMUNICATION SERVICE

SRS

Npm v Nabs nr ² gr 29.

4-5390

Biological Survey
Department Agriculture
Washington D.C.

Number seals desired noted stop Unable to land now
at Nihoa account weather stop Proceeding Honolulu for ten days while
ship cleans boilers

Wetmore.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-24-23.

NPM V NABS NR 1 Z D7S V NABS GR 88 .

4-5390

1021 eight pm report weather part cloudy baro thirty zero six wind southeast force three sea heavy swells stop anchored ~~888~~ west of Nihoa two pm stop account heavy surf breaking over southern coast unable affect landing this side ships boat with party of scientists explored western side where cliffs rise sheer from waters edge stop such landing as possible affected and satisfactory shell collections made stop expect change of wind will permit landing Adams Bay tomorrow when camp will be established and ship proceed Honolulu signed King 2030.

U. S. DEPARTMENT OF AGRICULTURE, OFFICIAL BUSINESS.

Bureau of Bureau of Biological Survey. Appropriation Biological Investigations.

SEND OFFICIAL TELEGRAMS { To Washington, D. C., and other charge-account points (Collect, Government Rate.)
 { From Washington, D. C., to all points (Paid, Government Rate, Charge.)
 { From charge-account points to all points except Washington, D. C. (Paid, Government Rate, Charge.)
 { All other official telegrams (Government Rate, Pay in Cash.)

Place Washington, D. C. Date May 24, 1923 Check _____ Filed _____

8-4756

Alexander Wetmore,
Care Bishop Museum,
Honolulu, Hawaiian Islands.

Important you get if practicable fifteen to twenty seals nearly
all fully adult and a good skeleton of each sex

NELSON

WR/ars

CABLE

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-24-23.

NABS V NPM NR 1 Z NABS V NPM GR 39.

4-5390

1924 following received quote for Alexander Wetmore USS Tanager
~~quoting~~ stop Nelson sends following quote important you get if practicable
fifteen to twenty seals nearly all fully aduly and a good skeleton
of each sex unquote signed Gregory endquote 1150.

.....9.37.p.m.

6/9/23

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,

AND REFER TO

Bi-~~S~~
Laysan

May 24, 1923.

Dr. Alexander Wetmore,
c/o Bishop Museum,
Honolulu, Hawaii.

Dear Doctor Wetmore:

I have received with much interest your wire concerning your visit to Lisianski and other islands, and also your letter of April 30, giving information concerning your work up to that time.

I am highly pleased that you have secured such a fine lot of seals and also that the rabbits have been exterminated not only on Laysan but on other islands where they had been introduced. It certainly was fortunate that we were able to have an expedition to Laysan this year to save the complete wiping out of the vegetation. As it is, the results of the rabbit pest appears to have been the loss of one species of bird.

You do not mention having taken any specimens of Laysan Teal, but that seventeen were seen. I trust you will not fail to get a reasonable percentage of these birds, since, as they are left to themselves, they can readily breed back. I hope also that you secured at least one nest and set of eggs. It is extremely interesting that you have found the seals so numerous on some of the islands visited and have been able to get photographs and learn something of their habits. This information will of course all be new and will enable you to prepare a most valuable contribution to the life history of these practically unknown animals. I hope that you may get some unknown species on your visit to Wake and some of the other islands. Owing to the extreme rarity of specimens of the seal in museums, I wish you would not fail to get a total of anywhere from fifteen to twenty specimens, of which the larger part should be full-grown males and females. It may be many years before there will be such an opportunity as you are now having to get these animals, and it appears to me a pity not to take advantage of it to get a goodly number. In addition to getting the skins and skulls of fifteen or twenty of the animals it would be a good thing if you could get at least a couple of complete skeletons of an old male and an old female.

I do not wish to burden you personally with work in this matter, but I take for granted that you are able to get the assistance of sailors or others to prepare specimens of this character, you merely directing how the work shall be done. The results of the expedition will undoubtedly be very fine, and, as its leader, of course you will have the satisfaction and credit of having done a fine piece of work.

Sincerely yours,

E. W. Nelson
Chief of Bureau.

Am greatly pleased that you have done so much to replant & thus restore vegetation on Saipan. Have just received a letter from Dickey in which he speaks very highly of the pleasant relations with you & the others on the trip & the helpful attitude toward his work.

E. W. N.

not mailed

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

IN REPLY REFER TO

At Sea off Naha,
May 24, 1923.

Mr. H. E. Gregory,
% Bishop Museum,
Honolulu, T. H.

Dear Mr. Gregory:

Your letter of May 9 together with the various supplies requested reached me safely on the morning of May 14. Please accept thanks for the trouble you were occasioned in fulfilling my many wants and also permit me to express the thanks of the "stay-outs" to the three "stay-ins" who were kind enough to send us the supply of candy.

As our work in Layan was completed we packed up, boarded the ship and were off for Lisianski the same day. Reached there at noon the fifteenth of May and landed at camp that afternoon. I remained there with Mr. Ball, Thamm, Grant, Baker and Schlemmer and the boat continued with the rest of the party to Pearl and Hermes reef again. When she returned five days later we packed up once more and started east. On May 22 we were able to land on Gardner Island thanks to the kindness of Commander King who by skillful handling of

the surf boat landed eight of us one by one on a little shelf of rock from which we climbed up over the rocks. Mr. Ball can furnish you all details of this work so that I need not enter into them here.

Our intention had been to stop at French Frigate Shoals but water shortage and conditions of the boilers make it imperative for the "Janagar" to return to Honolulu. At your suggestion we have been pinching a little on the time for the western work. In order to finish the high islands during June I hope to be able to establish a camp on Nihoa and remain there while the ship goes in to clean boilers. This will enable me to complete the bird work and be ready to move on when the ship returns. If we get ashore I shall take Thaamun, Schlemmer, Dranga and Thurston with me. The skiff men can do the collecting and locate places of interest for Dr. Cooke in case he comes out next trip. In addition I shall have Thaamun and Dranga gather in what marine invertebrates and fishes are available. When the "Janagar" returns we can turn our camp over to the geologist, ethnologist, botanist, & entomologist who come out and move on to Necker. This will enable us to handle the work here as it could not be done otherwise. As I said before it is very difficult to handle more than six in camp with the facilities available.

Mr. Thurston understands that all material collected goes to the Bishop Museum. The collections made by Dranga

and he are boxed separately ^{from those of Thaumum} as a matter of convenience but all go to you, with the understanding that ~~the~~ ^{Thurston} may have a selection of duplicates if any, at your discretion.

I assume that negatives of birds and mammals made by Mr. Lawrence are to be taken and retained by the Bishop Museum. In case the American Museum wants such photos for printing in its magazine etc; they should be obtained from the Biological Survey.

Mr. Reno has asked to be relieved in order that he may return to the States; I shall retain Schlemmer as my personal assistant for the rest of our work.

While on Laysan Island I had occasion to prepare skeletons of six each of the Laysan and Black-footed albatrosses. In such preparations the skins are discarded. Grant asked ~~permission~~ to be allowed to keep these and I gave him permission to do so, as otherwise they would have been thrown away. He has my permission to retain them with the understanding that birds may not be taken for plumage alone.

I have given Dr. Ball a list of wants & supplies to come out on the next trip of the "Tanager". I have retained this until the last moment for possible additions. Herewith a check for \$35.00 to cover the items enumerated. Please keep an itemized list of all such that I may get them for

my expense accounts.

My expense accounts.
Commander King will have certain details of the
work to discuss with you. Unless he secures other mess
stewards I suggest that you bring out some young
fellow to act as cook as we shall probably run
two camps and have but one capable steward.
You will also need to supply cooking utensils, as
the party is using mine at present and none are available
from the ship. I can let you have an oil stove
but you should send out 3 stew pans (3 quarts each), 3 ^{tin} buckets,
1 iron skillet, a butcher knife, a pie plate or two, ~~and~~ one or
two large spoons. We eat from army mess kits which
will be supplied from the ship.
I am sending a small box containing

will be supplied from the ship.
I am sending in a small box containing
some odd and ends and a sack with a couple
of turtle shells that I wish to hold at the
Museum until my return.
A fair wind tomorrow so

I would ~~not~~ ^{be} ~~in~~ ^{at} ~~the~~ ^{the} ~~Museum~~ ^{Museum} until my return.
 Here's a prayer for a fair wind tomorrow so
 that we may get ashore.
 With best wishes,
 Sincerely yours,

Sincerely yours,

Alexander Wetmore
Assistant Biologist.

6/9/23

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

May 23, 1923.

BI-S

Dr. Alexander Wetmore,
C/O Bishop Museum,
Honolulu, T. Hawaii.

Dear Dr. Wetmore:

Returning recently from my western field trip I read with much interest your various letters and radiograms that had accumulated. Your letter of April 30 is received, and also your radiogram of May 21, including your request that \$100 be added to your letter of authorization. This action is being taken, and I understand that it is to cover the expense of Mr. Reno's return.

We were very sorry, of course, to learn of the death of Mrs. Reno, particularly under such circumstances, and the news must have been a great shock to Mr. Reno out there in mid-ocean.

The work of the expedition appears to be working out very smoothly, and it really is gratifying to know that the rabbits have apparently been exterminated in the various places they occur. Your letter indicates a very interesting condition where the number of rabbits is dependent upon the definite amount of forage production of a certain kind, and the two have become so exactly balanced. This is a very interesting ecological condition. Unfortunately this close utilization of forage has doubtless led to the extermination or near extermination of some of the birds, but I hope that the vegetation you are planting will save some of them.

Your description of general conditions about coral reefs and your cruising to find openings for shelter remind me of some of my own experiences in working around tropical islands, where the bottom is uncertain and landings difficult. Still it is always enjoyable, and island work is always of rather especial interest, as you deal with an area that is completely detached and your problems become more clearly cut.

The specimens of the seal will be a valuable addition to our collection, and I am interested in your remarks concerning the small form of Rattus rattus. I hope you secured some specimens.

We shall look forward with interest to the receipt of the seven boxes you mention forwarding by express. These will, of course, be properly cared for immediately upon arrival.

Dr. A. W. ..2.

I had an interesting trip to the Grand Canyon Game Preserve, where considerable information was secured concerning the interesting condition that has developed there. The deer, as I think you already know, have become too abundant for the forage available at all seasons, so that unless control measures are taken, deer may be expected to die of starvation in the near future. I found about seven feet of snow on the top of the plateau and weather rather stormy and disagreeable at the lower elevations, but we were able to get about without difficulty. Owing to the depth of snow, however, I was obliged to detour through California in order to reach the southern side of the Canyon, where an examination was made of the proposed antelope range on the Tonto Plateau, which is the broad bench lying along the inner gorge. From Grand Canyon I went to the Wichita National Forest and Game Preserve, where some interesting observations were made on game conditions. Plans are being made for the disposal of surplus buffalo and elk, and I was especially pleased at the way wild turkeys are increasing in numbers. From a small introduction a few years ago, the wild turkeys have spread to many parts of the Game Preserve, which includes only about 65,000 acres, and I estimate that there are now at least 300 wild turkeys. It seems to be a place which can be depended upon to furnish a large number of wild turkeys for re-introduction into areas in which they have become extinct.

Dr. Nelson, as you probably already know, has returned from Florida in about his normal health.

Several of us attended the meeting of the American Society of Mammalogists in Philadelphia last week. These meetings are always much enjoyed, and have much the character of A. O. U. meetings, except that mammals are of course substituted for birds in discussions.

Mr. Howell returned several days ago from Florida, where the most noteworthy thing he did was to locate near the head of St. Johns River a place where there are still Everglade Kites in fair numbers. While the area is not large, a marsh 15 by 30 miles in size, where the birds have probably gathered from neighboring areas, there seems to be no immediate danger of their extinction. He secured 7 specimens for our collection.

Everything is going much as usual at the office.

With best wishes for the success of the remainder of your trip,
I am,

Sincerely yours,

E. A. Goldman
In Charge,
Biological Investigations.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

No. **850** -Bi.

ALLOTMENT, AND INCREASE OR DECREASE.

May 23, 1923.

Dr. Alex Wetmore,

Bureau Biological Survey.

Dear Sir:

By direction of the Chief, Bureau of Biological Survey, the sum of
\$ **100.00** has been **added to** the amount allotted for expenditures
under the appropriation "General Expenses, Bureau of Biological Survey, 192 **3**,"
SYMBOL NO. **4 (Bird Refuges)** , during this fiscal
(Show this number on each account charged hereto.)
year, under Letter of Authorization No. **131** -Bi., dated **Feb. 16, 1923.**

This is for the purpose of **covering expenses of Chas. E. Reno incurred on
return trip from Hawaii.**

No balance can be carried beyond the fourth quarter, ending June 30, 1923.

You will be held responsible for compliance with the terms of your Letter
of Authorization and for keeping within the amount of your allotment. IF YOUR
TOTAL ALLOTMENT IS EXCEEDED WITHOUT PREVIOUSLY OBTAINED WRITTEN AUTHORITY OF
THE CHIEF OF THE BUREAU, THE EXCESS WILL NOT BE MET BY THE BUREAU, UNLESS
(1) THERE IS MONEY AVAILABLE FROM THE PROPER APPROPRIATION AND (2) A SATIS-
FACTORY EXPLANATION IS MADE FOR FAILURE TO SECURE IN ADVANCE THE NECESSARY
INCREASE.

Very truly yours,

E. J. Cohnan
E. J. Cohnan.

In Charge of Accounts.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-22-23.

ck 17 Govt.

COPY

4-5390

Govt AGR Biological Survey
Agriculture
Washington.

Landed today on Gardiner Island stop proceeding now to Nihoa.

Wetmore.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-22-23.

NPM V NABS NR 1 Z DYS V NABS GR 155

4-5390

1022 eight pm report weather clear baro thirty zero zero wind southwest force one sea moderate swells stop ships boats succeeded in landing eight of scientific party on supposedly inaccessible Gardiner Island eight am this morning and got them off at noon as rising swells threatened to make landing impossible later stop half day survey showed abundant bird life scanty insect fauna and vegetation restricted to few scattered plants of pigweed stop shell collections unique though limited in variety and island marks western limit of range of blue rock tern described originally from Necker stop island presented steep barren appearance rising sheer from water with landing possible only on rocky ledge to southward stop clouds of birds of fourteen species flying continuously overhead stop afternoon spent in collecting fish close inshore comma preparation of specimens and hydrographic work stop proceeding eight thirty pm direct for Nihoa arriving eight am Thursday May twentyfourth signed King 2110.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-21-23.

NPM V NABS NR Z D7S V NABS GR 52.

4-5390

1021 ten pm report weather fine baro thirty zero two wind east
force one sea moderate ground swells stop anchored off Gardner
Island ten pm stop will send boats in early morning tomorrow to
make survey stop will proceed French Frigate Shoal seven pm
arriving seven am May twentythird signed King 2250.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-20-23.

COPY

CK 57 Govt.

4-5390

Govt AGR Biological Survey
Agriculture
Washington.

Camped on Lisianski five days making collection resident birds stop
two seals taken stop sent Reno to Pearl and Hermes Reef where he killed
rabbits on southeast island stop notify Gilchrist that Reno returns
Arizona June fifteenth stop require additional one hundred dollars to
letter authorization to cover Renos return.

Wetmore.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

c 5-20-23.

NFM V NABS NR 1 Z D7S V NABS CR 48.

4-5390

1020 eight pm position lat twentyfive fiftynine north Long one
seventytwo zero eight weather fine baro thirty zero six wind
northeast force one sea light swells stop broke camp nine am
and underway from Lisianski for Cardiner ten am arriving six pm
monday may twentyfirst signed King 2030.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-20-23.

NPM VNNABS NR 2 Z D7S V NABS GR 88.

4-5390

1020 for Prof Gregory quote now enroute Gardiner and French Frigate Shoals stop to simplify handling of camping parties on high islands plan to remain on Nihoa with Theanum Schlemmer Thurston and Dranga while Tanager returns to Honolulu stop can complete bird work locate shell deposits and prospect trails stop at beginning of third trip can turn camp over to new party and proceed elsewhere stop this will do away with difficulties incident to handling large party on island at one time signed Wetmore unquote signed King 2045.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-19-23.

NR1 V HABS NR 2 3 D73 V HABS GR

4-5320

1019 eight pm report weather cloudy baro thirty fifteen wind northeast force one sea light swells stop anchored off Lisianski ten am stop camp reports good weather and satisfactory results in survey stop skeleton remains found indicate desolation of island cause by rabbits now extinct from lack of vegetation stop dead land shells found show existence of vegetation within recent years similar to former condition Laysan Wilder planted two bags seedalso grasses brought from Pearl and Hermes Reef stop will break camp nine am tomorrow may twentieth and proceed Gardiner island arriving daylight tuesday may twentysecond stop in vicinity Pearl and Hermes Reef yesterday caught forty ulua totaling twentytwo hundred pounds also caught tiger shark eleven feet five inches long containing head of baby seal in belly signed King 2130.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-18-23.

COPY

NPM V NABS NR 1 Z D7S V NABS GR 98.

4-5390

1018 eight pm report Lat twentyseven thirtyeight north long one seventyfive fortysix west weather fine baro thirty zero eight wind light airs from northwest veering around to southwest sea smooth stop took party in motor sailer into lagoon and traversed length of atoll visiting three islands including northermost of atoll and southeast island where killed few rabbits and left only one seen alive stop planted ten hau trees and three cocoanuts on northermost island stop scientists expressed themselves well pleased with shell and sea life collections stop underway six thirty pm for Lisianski arriving nine am signed King 2130.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-17-23.

NPM V NABS NR 1 Z D7S V NABS GR 56 .

4-5390

1017 eight pm report weather overcast passing showers baro twentynine
ninety wind northwest force one sea light swells stop anchored northeast
of Pearl and Hermes Reef stop strong southwest breeze all day moderating
at sunset prevented landing stop ship continued running survey and expect
finish work ashore tomorrow departing for Lisianski seven pm signed
King 2100.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-16-23.

NPM V NABS NR Z D7S V NABS GR 101.

4-5390

1016 eight pm report. weather partly cloudy baro thirty zero zero wind southeast force two sea light swells stop arrived Pearl and Hermes reef eight am and set party ashore on southeast island stop ship employed making running survey of atoll until four pm when returned vicinity southeast island embarked party and anchored for night stop Reno reports only five rabbits seen four killed expect finish by tomorrow evening and return Lisianski stop ~~XXXXXXXXXXXXXXXXXXXX~~ Wilder planted miscellaneous seeds stop fine weather prevails and fish both in lagoon and outside reef abundant several hundred pounds ulua caught within few hours signed King 2130.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-15-23.

NPM V NARS NR 3 2 DTS V NARS GR 198

4-5390

1015 eight pm position lat twenty six ten north long one seventy four
seventeen west weather rain baro thirty ten wind variable light air
sea light swells stop anchored off Lisianski at two pm and established
camp ashore by five pm consisting of etmore comma Schlemmer comma
Hall comma Thannum comma Grant comma Baker comma and Navy S#teward
Biggs stop island more desolate than Laysan only vegetation slight
growth grass northwest corner stop Alder planted seed of mile comma
ironwood and huckle leaf in this vicinity stop birds and turtle
plentiful and several seal on beach stop no signs of rabbits stop
corrugated iron roof of fair sized building comma evidently blown off
comma resting intact near center of island comma building itself
demolished stop framework of smaller shack upright nearby stop on
western beach wreck of sampan found and close to large number of
rusted five gallon oil cans partially buried in sand stop on southeast
beach two older wrecks comma one sampan and one small ships boat stop
at six pm got underway for Pearl and Hermes Reef with Reno and
remainder of party to exterminate rabbits on southeast island
arriving noon tomorrow may sixteenth signed King 2000.

U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

5-15-23.

ck 41 Govt.

4-5390

Govt Agr Biological Survey.

Agriculture.

Washington.

Work completed Laysan stop rabbits apparently exterminated none
seen past eight days stop vegetation increasing quantities seed
planted stop Reno will return when ship goes Honolulu about June
first stop party now encamped Lisianski.

Wetmore.

USS Tanager

5-14-23.

NPM V NABS NR 2 Z D78 V NABS GR 318.

1014 eight pm position lat twentyfive fortysix north long one seventyone fiftythree west weather cloudy baro thirty zero six wind northwest force three sea moderate swells stop landed at Laysan daylight this morning found party all well stop report satisfactory success in general biological survey of island and surrounding reef stop complete collections obtained of birds and molluscs stop albatross young three months old when camp first established now well grown and some will be on the wing within the month stop heavy surf destroyed many eggs of tern colonies nesting on beach but birds have moved to higher sites and are again breeding stop extermination of rabbits apparently completed none seen in past eight days stop vegetation already springing up from seed whose presence in sand was unsuspected stop large seal taken to be mounted and destined for Bishop Museum stop weather past two weeks mostly overcast and misty with occasional rains stop camp reports varied menu including seal liver shark and turtle steak breasts from frigate birds albatross and other large birds killed for specimens and many kinds of fish stop from examination of stomach contents of birds killed flying fish and squid appear to be main food of sea birds that nest on Laysan stop ships boats employed all day breaking camp and embarking personnel and equipment including fifteen cases specimens stop Gerrit Wilder planted in suitable localities containing moisture suggested by young Schlenker large quantities of milo seed comma native palms comma logwood comma ironwood comma Hawaiian lobelia comma seeds of various vines comma and spread broadcast twentyfive pounds of Haole Koa seed and planted growing Hau seedlings and branches all provided by Charles Judd of Bureau Agriculture and Forestry stop other newcomers to party occupied in fishing comma shell collecting and photographing stop all hands embarked six pm underway for Lisianski Island seven pm arriving ten am tomorrow May fifteenth signed King 2110.

U. S. NAVAL COMMUNICATION SERVICE

SRS

COPY

USS Tanager 5-13-23.

NPM W NABS NR 1 Z D7B V NABS GR 64.

4-5390

1013 eight pm report weather partly cloudy baro thirty zero four wind
east force three sea heavy ~~swells~~ westerly swells stop anchored off
Laysan seven pm stop beacuse of darkness and heavy sea will not send
boat ashore until daylight tomorrow stop present sea caused by winds of
past few days and expect better conditions with recent change to easterly
winds stop signed King 2020.

5/24/23

BERNICE P. BISHOP MUSEUM
HONOLULU, HAWAII,

OFFICE OF THE DIRECTOR

May 9, 1923.

Dr. Alexander Wetmore,

In Camp,

Laysan Island.

My dear Wetmore:

I am delighted to learn that the field work is progressing so satisfactorily and that the personal relations are established on such a cordial basis -- they usually are when the head of the party is made of the right kind of stuff.

- (1) The supplies and mail asked for by you, Reno and Ball are being placed on the "Tanager" today.
- (2) Your boxes are headed for Washington after a scrap with the American Express Agent who demanded a government bill of lading.
- (3) My entomological advisers have led me to keep Fullaway in Honolulu for Trip B. They recommend that Grant function primarily as an insect collector at Lisiansky and French Frigate Shoals. Fullaway's collecting equipment is returned for Grant's use.
- (4) Gerrit P. Wilder replaces Caum as botanist.
- (5) Since fish, mollusks and other marine material can probably be obtained at Laysan and Lisiansky better than elsewhere along the island chain, L. A. Thurston and Theodore Dranga are coming to supplement Ball, Thaanum; and John Baker and Austin Jones are sent to join Dr. Wilson. These men are reputed to be unusually skillful.
- (6) (Private) Frank R. Lawrence is a wealthy New Yorker-- amateur naturalist and expert photographer. He is sent at the request of the American Museum with the hope that his interest may be aroused to the point of financing some project. He has agreed to be a general slave.

- (7) As heretofore, none of the men in the scientific personnel have specific instructions from me. They are to be fitted into the team as you and Ball wish.
- (8) The Trip C (June) party will be organized for work on cliffs and rocky shores, Subject to advice from you and Ball, I propose to leave at home: Thurston, Lawrence, Dranga, Wilder, Baker, Jones also Schlemmer unless you wish him. The substitutes will be Bryan, C. S. Judd, Caum, Cooke, Atkinson, Palmer and perhaps Gregory. The July trip can again be organized for all sorts of marine work.
- (9) (Private) Grant sent in a box of bird breasts and wings for his wife. I am holding them on the ostensible ground that they need to be treated at the Museum, but really because there is likely to be trouble among the other wives unless Grant has permission in writing from you. I await your instructions.
- (10) I shall be personally pleased if the work to be done during the May and June trips can be finished in time to permit the "Tanager" to reach Honolulu about June 25. All of July is probably scareely enough for Johnson, Wake and the little intervening reefs. A minor consideration is that Cooke and Gregory leave for Australia on July 7. But unless the work in the Bird Reservation can be done to your full satisfaction during a shortened schedule, these considerations should have no weight.
- (11) If you want to leave a party on Niihau or Kauai at the end of the May trip to be picked up in June, please let me know as early as possible, I'll try to make satisfactory arrangements.
- (12) The distressing news of the death of Mrs. Reno had better come through you. The enclosed cables tell the story. Anything that I can do will be done.

Very truly yours,

Herbert E. Gregory
Director.

HEG: SJ

TERRITORY OF HAWAII
BOARD OF COMMISSIONERS OF AGRICULTURE AND FORESTRY
DIVISION OF FORESTRY

P. O. Box 3319

HONOLULU, HAWAII

May 7, 1923

Dr. Alexander Wetmore,
Laysan Island, T. H.

Dear Dr. Wetmore:

There is being sent you, by the S.S. Tanager leaving Honolulu May 9, a shipment of tree and plant seeds for use in the attempt to revegetate Laysan Island. The list includes such of the littoral species as we were able to find in fruit locally. Unfortunately there is a dearth of Hau and Puhala seed at present but it is hoped that a quantity of the latter can be obtained for a later trip. The present consignment is as follows:

Calophyllum inophyllum	-	Native Kamani	1	gunny sack
Barringtonia asiatica	-	Botong (in P.I.)	2	" "
Casuarina equisetifolia	-	Lowland Ironwood	2	pounds
Thespesia populnea	-	Milo	5	"
Pritchardia pacifica	-	Fiji Fan Palm	10	"
Leucaena glauca	-	Ipil-ipil, Haole		
		Koa	26	"
Haematoxylum campechianum	-	Logwood	3	"
Ipomea pes-caprae	-	Beach Morning		
		Glory (Pohuehue)	$\frac{1}{2}$	"
Scaevola frutescens	-	Beach Naupaka		
		(Naupaka kahakai,		
		Huahekili)	1	pckt.
Hibiscus tiliacens	-	Hau (seed)	1	"
" "	-	Hau (potted		
		plants)	9	plants

Very sincerely yours,

Chas. J. Krael.

Asst. Supt. of Forestry

CJK/HM

5/27/23

TERRITORY OF HAWAII

BOARD OF COMMISSIONERS OF AGRICULTURE AND FORESTRY

P. O. BOX 3319
207

HONOLULU, HAWAII

May 7, 1923

Dr. Alexander Wetmore
Laysan Island, Territory of Hawaii,
U. S. A., Pacific Ocean.

Dear Dr. Wetmore:

By this trip of the "Tanager" I am sending to you, in response to your wireless request a quantity of seeds of trees and shrubs which might succeed on Laysan Island and also some slips of the hau bush. A list of these seeds is included in the enclosed letter from my assistant. I hope that some of these at least will serve the purpose of bringing back some vegetation on Laysan which I understand has been badly denuded.

Having in mind the words of caution which you gave to us concerning the introduction of birds, some doubt has entered my mind as to the advisability of allowing entry into Oahu of the Laysan finches which were brought on the last voyage of the "Tanager".

Only male birds were supposedly brought in for entry in this Island but on account of the possibility that some of these might be females and might escape, propagate and become a nuisance, it has been deemed advisable to be discreet, and the Chief Plant Inspector has been advised not to allow their entry in to Oahu. He has, therefore, arranged to have them sent back to Laysan in the interest of bird life conservation.

Your specimens are being taken care of and will go forward to Washington in accordance with your instructions.

I hope that you are enjoying life on these desert islands, and hope to see you on the June trip.

Very sincerely yours

C. S. Judd

CSJ:K

Executive Officer

20
At first Dad was going to inform the newspaper men but since you are at the head of the expedition he said he'd let you know. While at Laysan he sent the first rails and canary birds to Midway by Captain Niblack and others later by Captain Piltz.

He also asked me to let you know that the two coconut trees on Laysan were planted there by him in 1895 and he said they have an interesting history that he might tell you sometime.

(Came from Jaluit in the Marshall Is!)

1160 Gulick Avenue ^{5/14/23}
Honolulu, T. H.
May 6, 1923.

Dr. Alexander Wetmore
At Laysan Island.

My Dear Sir: -

Dad is quite busy at present but has asked me to write you a short message for him.

There was an article in our daily paper saying no one knew how the canary or rail or these small birds were put on Midway Island.

3⁰

He also planted the "Hau
Trees" on the Island a little
later than the coconut trees.

Dad asked me to inform
you of these facts and also
send his best wishes to you
and hopes you are enjoying
your trip and experiences
on the Islands.

Cordially yours,
Therese Schlemmer

6/9/23

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

May 4, 1923.

Dr. Alexander Wetmore,
c/o Bishop Museum,
Honolulu, Hawaii.

Dear Doctor Wetmore:

Your letters of March 21 and April 1 were read with great interest on my return to Washington, also your various telegrams, including one received this morning stating that you had worked five days on Ocean Island, two days on Midway, and three days on Pearl and Hermes Reef.

I am highly pleased that you have secured eight seals and a good series of birds. It is highly gratifying that the expedition appears to be making such fine progress as outlined in your letter and matters could scarcely have been arranged more satisfactorily for the work to be successful, and I anticipate very fine results.

The changes in your letter of authority referred to in your letter of April 1 have been made. I hope you have written me giving more details as to the results you have secured. I hope you may have found Laysan teal sufficiently numerous to get a handsome series of them, and that you may discover a new species of teal on Wake Island besides other new things.

I was pleased to learn from one of your telegrams that you had the rabbit situation on Laysan in hand, and trust that you may achieve absolute extermination of them on this and any other island where they are located. This is important as you know.

It is fine that you have planted some trees on Laysan to assist in reestablishing the vegetation there. I hope that enough of this can be done during your stay in that region to make a real start toward reestablishing favorable conditions for the birds.

Until I hear from you I shall be anxious as to the fate of the land birds which lived there and were dependent upon the bushes and other vegetation.

I returned from Florida very much benefited by my trip and am now back at the office in about my normal condition. I appear to have practically rid myself of the results of the grippe. Hope the health of yourself and all others on the expedition continues to be very good. Please give my regards to Professor Gregory, Dickey and Reno.

Sincerely yours,


Chief of Bureau.

DEPARTMENT OF THE NAVY
BUREAU OF STEAM ENGINEERING
N. S. E. 196

U. S. NAVAL RADIO SERVICE

RECEIVED OR FILED
AT STATION

OR U. S. S.

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TIME

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PREFIX		ORIGIN	NO.	OPERATOR		CHECK	FILING DATE
RADIO	NAVY			SNDG.	RECG.		
						GOVT.	

VIA _____

GOVT.

Npm v Nabs nr 2 Z Npm v Nabs gr 57

1029 Your nineteen twentyfive dash sixteen fifty for Prof Gregory quote Thompson returning Ball Thaanum Grant remaining with Wetmore Reno Schlemmer on Layson stop Fullaway desires to make second trip stop Cuam wishes to make third trip instead of second if such arrangement can be made stop Tanager leaving Honolulu May ninth on second trip signed King unquote 1800.

© 4—2055

FORWARDED { TO VIA							
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SECOND TRIP

LEAVE	ARRIVE	AT ANCHOR	PLACE	DISTANCE
Wed. 9 May.	Sat. 12 May.		Honolulu	
			Laysan	
		Sun. 13 May.	"	
Mon. 14 May			"	
	Mon. 14 May.		Lisianski	
		Tues. 15 May.	"	
May proceed Pearl and Hermes during this period		Wed. 16 "	"	
		Thur. 17 "	"	
		Fri. 18 "	"	
		Sat. 19 "	"	
Sun. 20 May.			Lisianski	
	Mon. 21 May		French Frigate Shoal	
		Tues. 22 May.	"	
		Wed. 23 "	"	
		Thur. 24 "	"	
		Fri. 25 "	"	
			"	
Sat. 26 May.				
	Mon. 28 May.		Honolulu	
10 working days to clean boilers; over 1000 steaming hours.				

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

No. 138-B1.

LETTER OF AUTHORIZATION—AMENDMENT

Washington, D. C., April 16, 1923.

Dr. Alex Wetmore.

Assistant Biologist.

Your letter of authorization No. 131-B1, "General Expenses, Bureau of Biological Survey, 1923", is hereby amended so as to authorize actual and necessary traveling expenses of your assistant, Charles E. Reno, from Willcox, Arizona, to the Hawaiian Islands and regions of those islands and return to Willcox, Arizona, instead of such expenses from and return to Phoenix, Arizona.

This letter is further amended so as to permit you to authorize, when deemed expedient, the purchase by Mr. Reno of such special supplies as may be necessary in the prosecution of his work.

Your permanent headquarters will be Washington, D. C.

A true copy: Effective February 16, 1923.

J. E. Jacoby
8-3473

Chief Clerk and Executive Assistant.

W. C. Henderson

Acting

Chief of Bureau.

DEPARTMENT OF THE NAVY
BUREAU OF STEAM ENGINEERING
N. S. E. 196

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4-17-23.

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RADIO	NAVY	USS Tanager.		SNDG.	RECG.	14	GOVT.

VIA _____

GOVT. AGR Biological Survey
Agriculture
Washington.

Encamped today with western party Ocean Island.

Wetmore.

c 4—2055

FORWARDED { TO VIA							
		DATE		TIME		M.	
PREFIX		ORIGIN	NO.	OPERATOR		CHECK	FILING DATE
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U. S. NAVAL COMMUNICATION SERVICE

SRS

USS Tanager

4-15-23.

BPM V NABS NR 2 Z D7S V NABS CR 47.

4-5390

1015 for Prof Gregory Bishop Museum quote camp broken Laysan stop
collections from there satisfactory stop supplies requested received
stop please send following cable for Reno quote J F Greenwood Willcox
Arizona news received arrive home about June fifteen Reno unquote
signed Wetmore unquote signed King 1945.

USS Tanager

4-13-23.

1013 eight pm report weather fine barometer thirty fifteen wind northeast force two sea smooth Tanager leaving daylight tomorrow april fourteenth for Midway Direct stop six men Ball Dickey Reno Thompson Schlemmer and one BO cook Haig remaining in camp Laysan stop expect arrive Midway four pm april fifteenth stop please inform cable office Honolulu stop as previously reported Laysan has been practically denuded of vegetation by rabbits and drifting sand has covered fresh water pond and filled in salt water lagoon to some extent stop appearance of island considerably altered stop buildings filled with drifting sand stop extermination of rabbits progressing rapidly stop small patches remaining vegetation already shown improvement stop colonies of sea birds unaffected by changes that have wrought hardships on small land birds stop very satisfactory collections of birds and marine invertebrates have been made stop two seals of tropical species peculiar to these islands taken stop after landing cable operator at Midway comes Tanager proceeding Ocean Island for several days survey thence returning Midway for short stay comes thence Pearl and Hermes reefs comes then return Laysan to pick up members of party there and return Honolulu arriving about May third stop please inform Professor Gregory signed King 2145.

Hon. to Laysan 931 miles
Laysan to Midway 337. ..

DEPARTMENT OF THE NAVY
BUREAU OF STEAM ENGINEERING
N. S. E. 196

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BY

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4-13-23.

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RADIO	NAVY			SNDG.	RECG.		
						GOVT.	

VIA _____

GOVT.

2015 FOR A. A. GREGORY DISBOW MUSEUM STOP IN COMPLIANCE WITH REQUEST from Admiral Simpson for press bulletin on progress of work. have been furnishing King with information of general character of interest to public stop because of scanty vegetation botanical and entomological collections from Laysan limited but satisfactory gatherings made in other lines stop can you arrange with Judd for seed of sand binding plants to replace vegetation on Laysan for second voyage of Tanager 2342. Signed Wetmore 2150.

C 4-2055

FORWARDED { TO VIA				DATE		TIME		M.
				OPERATOR		CHECK		FILING DATE
PREFIX		ORIGIN	NO.	OPERATOR		CHECK		
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NAVY

SNDG.

RECG.

41.

GOVT.

VIA

GOVT.

102 Biological Survey
Agriculture
Washington.

Six men including Reno Dickey remain camp Layan stop remainder
party continue west Midway and Ocean stop rabbit situation
apparently in hand stop have planted two species trees and am
arranging replacement other vegetation.

Netmore.

0 4—2055

FORWARDED

TO

VIA

PREFIX

ORIGIN

NO.

DATE

TIME

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RADIO

NAVY

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DEPARTMENT OF THE NAVY
BUREAU OF STEAM ENGINEERING
N. S. E. 196

U. S. NAVAL RADIO SERVICE

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4-10-23.

TIME

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PREFIX	ORIGIN	NO.	OPERATOR		CHECK	FILING DATE
RADIO	NAVY		SNDG.	RECG.		
					GOVT.	

VIA _____

GOVT NABS V NPM NR 2 Z NABS V NPM GR 28.

1910 following received for Comdr King quote Revised plan to survey
outer Islands in May and Necker and Mihoa in June has my approval
signed Gregory unquote 1800.

10.15.P.M.

C 4-2055

FORWARDED	TO					
	VIA					
PREFIX	ORIGIN	NO.	DATE		TIME	M.
RADIO	NAVY		OPERATOR		CHECK	FILING DATE
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					GOVT.	

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Copy for Dr. Wetmore.

April 3, 1923.

Commander S. W. King,
Naval Station,
Honolulu, T. H.

My dear Commander:

The scientific personnel of the Tanager Expedition for Trip "A" (April) is as follows:

Alexander Wetmore, Chief of Scientific Staff;
Stanley C. Ball, in charge of Bishop Museum representatives;
E. C. Reno;
David T. Fullaway;
Edward L. Caum;
David Thaanum;
C. Grant;
J. W. Thompson;
Donald H. Dickey;
John Baker;
Max Schlemmer, Jr.

Very truly yours,

Herbert E. Gregory
Director.

HEG: SJ

TANAGER EXPEDITION,

General Information.

The Scientific Personnel is under the general supervision of Dr. Wetmore. Subject to his approval members of the Bishop Museum Staff will receive instructions and suggestions from Stanley C. Ball for Trip "A" (April) and for Trip "B" (May); and from Charles H. Edmondson for Trip "C" (June) and for Trip "D" (July).

Each member of the scientific party will be responsible for a particular class of work, but when opportunity permits, will devote his attention to enlarging the collections of materials outside of his professional interest. There is no objection to duplicate collections, or to recording the same observations by different individuals.

It is required that all field data other than botanical be recorded in the official Field Note Book, and that botanical data be recorded in the Herbarium Note Book, both books to be supplied by Bishop Museum.

For the guidance of members of the staff unfamiliar with collecting, suggestions for preserving and recording materials obtained will be supplied.

Herbert E. Gregory,

Director.

April 2, 1923.

TANAGER EXPEDITION

Suggestions for Collecting Insects on Small Islands.

1. Apparatus: Cyanide killing bottles, bottle of about 30% alcohol, empty bottles or small boxes, and if possible an insect net, which may be readily made from a stick (handle), a loop of stout wire passed through a tack in the mouth of a cloth bag.
2. How to collect and preserve insects: Insects may be caught in the net, in the hand, or by placing the mouth of the killing bottle over the creature, and by picking up the slow moving forms. All soft, squashy forms, such as termites (white ants), caterpillars (except those saved for breeding out the moths), maggots of flies, sow-bugs, centipedes, scorpions, worms, etc., should be placed in the alcohol. The flying (winged), jumping, and hard crawling insects should be killed in the cyanide bottle and after half an hour or so removed and kept until return to camp in the empty bottles or boxes. Then they should be given to the entomologist to mount or placed between sheets of cotton or soft paper in a small box.
3. Where to look for insects: On vegetation; leaves, stems, flowers, in soil among roots, under bark, in rotting or dry twigs or logs, beneath rocks, drift wood, fallen trees, etc. Attracted to or eating on dead animals. About pools of water. In damp, marshy places, in crevices in rocks, flying about generally.

Collect everything and as many specimens of each as you can.

TANAGER EXPEDITION.

Suggestions for Recording Archaeological Information.

For the purpose of this expedition any evidence of the presence of man, except obvious recent settlement, are to be considered archaeology.

1. Ruins: Walls, platforms, stone piles and other structures are to be measured, mapped and photographed and their mode of construction and materials described in detail. Sketches are particularly useful. This applies to ruins either on the shore or inland.

2. Caves: Piles of stone, early mounds and dunes should be searched for evidences of burial. If skeletons are found they should be collected and observations regarding manner of burial and articles associated with the burial be carefully noted. Caution: Skeletons are fragile - after being uncovered they should be exposed to the air for a time and then the big bones, arm, leg, pelvis, skull, separately wrapped.

3. All stone, wood or fibre articles indicating former occupation by man should be collected and location and position recorded. If possible, locate the quarry for stone implements or at the least get chips of rock from the vicinity.

4. Draw or photograph pictograph engraved on rock and elsewhere for ashes and smoke marks.

TANAGER EXPEDITION.

Suggestions for Collecting Rock Samples.

It is desirable to obtain from each island visited rock samples sufficient in number and kind for chemical and microscopical study and to show the general structure of rock formations.

Varieties: From each island where they occur, several samples from different localities of dense lava, porous lava, volcanic ash, "sandstone" (consolidated dune sand), dune sand, beach muds, coral reef, and pebbles of unusual kinds should be collected. The rock samples, about 4" x 4" x 2" in size, should be taken from the least weathered ledges, the sands and muds may be preserved in bottles or in tin cans.

Record: Each specimen should be accompanied by a record giving geographic locality, position with reference to surrounding rocks. For Example, "No. 5. Cliff on N. E. point Necker Island, middle of series of eight flat lying beds."

TANAGER EXPEDITION

Suggestions for Collecting Certain Organisms

Towing: Tow whenever possible, open sea, lagoon or along shore from small boat. Bottle with a little formalin.

Both day and night records would be good. Each record should show, if possible, locality, the time of day, condition of atmosphere (cloudy, etc.), temperature of water and air.

Quantitative plankton work: Worked from deck of ship. Dip up known quantity of water in bucket from surface of sea (about 12 quarts) and pour through fine tow net with bottle at bottom. Preserve with a little formalin. Record should show locality and other conditions as under towing.

To secure minute forms from seaweed: Shake things off seaweed in a pan with a little water and save all bottom stuff. Preserve in formalin. Or seaweed may stand in stagnant water for several hours. Things die and sink to bottom. Pour off water and save bottom stuff.

Minute forms in sediment on rocks: Scrape sediment from flat rocks into bottles. Minute organisms such as Pycnogonids are often on the surfaces of rocks in sediment.

Coral samples: Coral may be bleached on the spot if time permits. Some samples would be good shipped in alcohol to preserve the commensal crabs in them.

Commensal crabs on coral: Look for the gall-forming crab on Pocillopora caespitosa, also the tube-dwelling crab in Favia, Cyphastrea, etc.

Hydroids: Look for hydroids attached to rocks, etc., in shallow water as well as deep.

Suggestions for Collecting Certain Organisms

Page 2.

Enteropneusta: Yellowish or white worm-like forms under rocks on in the surface sand, about the diameter of a lead pencil and from 4 to 12 inches long. Expand and fix in alcohol. A species was described from Laysan many years ago. We hope to get some more to compare with the Hawaiian forms.

TANAGER EXPEDITION.

SUGGESTIONS FOR COLLECTING SHELLS.

A. On high islands.

The shells found around gardens and cultivated spots are usually imported species. The shells that will be most valuable to us are the endemic species. The most popular habitats are under dead logs and piles of stones. Also look on trunks of trees and on the under surface of leaves of lowgrowing shrubs and ferns. The shells of the T. H. are most abundant in open forests and the margins of thick forests. If you have the opportunity, please send rather large samples of moss from the trunks and branches of trees of thick forests, as this is a favorite habitat for minute species.

Barely cover shells with solution of alcohol made by using one part of the alcohol provided you add two parts of water. Fill bottle with soft paper or cotton without crowding. Just before shipping pour off excess alcohol and tighten cork.

B. On low islands-

Look under stones, sticks and leaves; on trees, bushes, grass and rocks. Collect samples of sand (1/2 pint at least) at water's edge along beaches. The latter may be placed in muslin bags about 5 x 8 inches and allowed to dry for shipment to Museum. Gather Mosses and lichens from rocks, bushes and trees. Place them in similar bags or in pasteboard boxes.

If any palm trees are seen, carefully examine leaves and bark (also leaves, sticks or stones under trees) for minute shells 1/16 inch long or larger. Place them in alcohol as directed in (A) above.

Collect muslin bags or boxes full of earth wherever live shells have been found on trees or bushes above.

TANAGER EXEDITION.

Suggestions for Collecting and Preserving Fishes.

In collecting specimens of fishes in any new locality in the Pacific the goal should be to secure a representative lot. While rare or remarkable forms are desirable, the commoner species are more important.

Many marine fishes are very large when fully grown and hence are difficult to preserve. Fortunately, half-grown individuals or even younger ones are satisfactory for illustrating the species. Any specimens large enough to be brought into market will be large enough for the Museum study collections.

Fishes must be secured while fresh unless they have been frozen immediately after capture. Even the latter are less desirable. Color patterns are more likely to endure preservation if specimens are cured while fresh --less than ten hours out of water and protected from sun.

Ethyl alcohol is the best preservative. It should be neither too weak (less than 60% allows decomposition to proceed) nor too strong (over 85% shrinks tissues and destroys color rapidly). Between 70% and 80% alcohol is best. Rice rum of full strength is excellent. In fact any trade liquor of 60% alcoholic content does very well. Formaldehyde of 10% strength will do for temporary purposes, but should be replaced by ethyl alcohol as soon as possible. Formaldehyde softens bones besides making the study of specimens very disagreeable and even painful.

Wood alcohol should be avoided altogether.

Never place a fish over 3 inches long in preservative without opening the abdominal cavity unless a syringe is at hand. Use a knife, and inserting it in the anal opening, run it forward on the right side of the body for an inch at least -- more in large specimens. Push point of blade into flesh along back bone and backward into tail region if fish is over 6 inches long.

An injecting syringe is invaluable. Its needle can be used to force fluid into abdominal cavity and into the fleshy parts at various points. The specimens are least damaged by this method.

Small fishes (6 inches long) are sufficiently cured after three days immersion in alcohol to stand wrapping in cloth moistened with the same and packing in an air-tight container for shipment. It is well to add a small quantity of alcohol before closing covers. Never leave large empty spaces in the container, for this leads to rubbing and damage to specimens.

Continued.

Suggestions for Collecting and Preserving Fishes.

Page #2.

Locality, date, native name, and collector's name may be written with soft heavy pencil on good quality paper and the label tucked into the mouth or gill opening, or enclosed with the fish in a wrapping of cheesecloth. These labels are important, but if circumstances forbid their preparation, at least a single label must be enclosed in the container telling locality and date with name of collector.

The sooner the field collection can be forwarded to the Museum the better. There specimens should be examined, sorted and supplied with fresh alcohol. Labels should be carefully checked, and if necessary replaced.

Local markets and fishermen often can be induced to supply fish at the market price, but if only these sources are depended upon many small species will be missed. Boys may be induced to fill the gaps with small shore forms. All this in case the field worker cannot himself do the collecting.

TANAGER EXPEDITION

SUGGESTION FOR COLLECTING BOTANICAL MATERIAL.

(A.) Seed Plants.

1. Indigenous flora.- The most favorable places to collect indigenous plants of the high Polynesian islands are to be found, as a rule, at the head of vallies, on cliffs, high ridges, or steep slopes, which have never been inhabited, cultivated, or burned over by fire. Areas in the cloud zone, too wet to burn and rarely if ever visited by man are often the only parts of an island where the original vegetation remains intact. Elsewhere the indigenous plants have been cleared away to make room for breadfruit, taro, banana, and other plants of the early native agriculture.
2. Ethno-botany.- Low elevations, particularly near permanent streams, and high elevations suited to the cultivation or growing of food, ceremonial, medicinal, cordage, and fiber plants of the early inhabitants are favorable for the collection of plants upon which the natives formerly depended for existence. Record native name and use; usually the natives distinguish several varieties of each of their agricultural plants and have an intimate knowledge of them; they also distinguish sharply between their ancient agricultural plants and those subsequently introduced by Europeans.
3. The specimens collected should illustrate typical variations of the stem, leaves, flowers, and fruit; also, the underground parts of small plants easily pulled up. They should be dried as rapidly as possible between sheets of newspaper, weighted down or tied in bundles to give moderate pressure. Each day, the papers should be changed until the specimens are dry then sprinkle with anphtaline. The white record sheet is torn from the note book and remains always with the numbered specimens. Fruit, flowers, and other parts that do not press well may be preserved in two percent formaline or in alcohol, using for the purpose wide

TANAGER EXPEDITION

mouthed bottles or fruit jars. The contents may be numbered in pencil, but the numbers should also be written on a label outside the jar, since the inside labels sometimes stain too deeply to be legible. Fruits of breadfruit, corms of taro and similar material may be photographed or described. For Pandanus, gather a few of the drupes, record color, and photograph or describe the aggregate head of drupes; also, gather a few mature leaves.

B. SPORE PLANTS.

The field note-food is designed primarily for seed plants; a few alterations, however, will adapt the record sheet for spore plants, such as ferns, or records may be written on the reverse side of the yellow sheets and numbered to correspond to the specimen.

1. Ferns and fern allies. - The field note book sheet may be used by crossing out "flowers" and fruits," and entering descriptive notes. Collect as complete a specimen as possible including rhizome and having both fertile and unfertile fronds. Large fronds may be divided and pressed in successive order. A diagram should be made of fronds too large to press.

2. Mosses and Liverworts, - Collect fully mature fruiting plants of the mosses; but fruiting specimens are not always necessary for liverworts. Fleshy liverworts should be preserved in formaline or alcohol. If fruiting liverworts are found they should be preserved in formaline or alcohol.

3. Algae. - Preserve in two percent formaline or in alcohol; record whether fresh water or marine, and the substratum of attached forms. Describe method of attachment, and secure fruiting specimens if possible. Record depth of water in which they are found. Fragments of coral reef bearing algae may be broken off and dried.

TANAGER EXPEDITION.

4. Fungi:- The fleshy fungi should be fully described or photographed then placed in formaline or alcohol, or dried in the sun, woody fungi may be dried in the sun; after drying, they should be placed in tightly covered vases with naphtaline.

5. Lichens may be dried: describe and record substratum.

FIRST TRIP.
ITINERARY

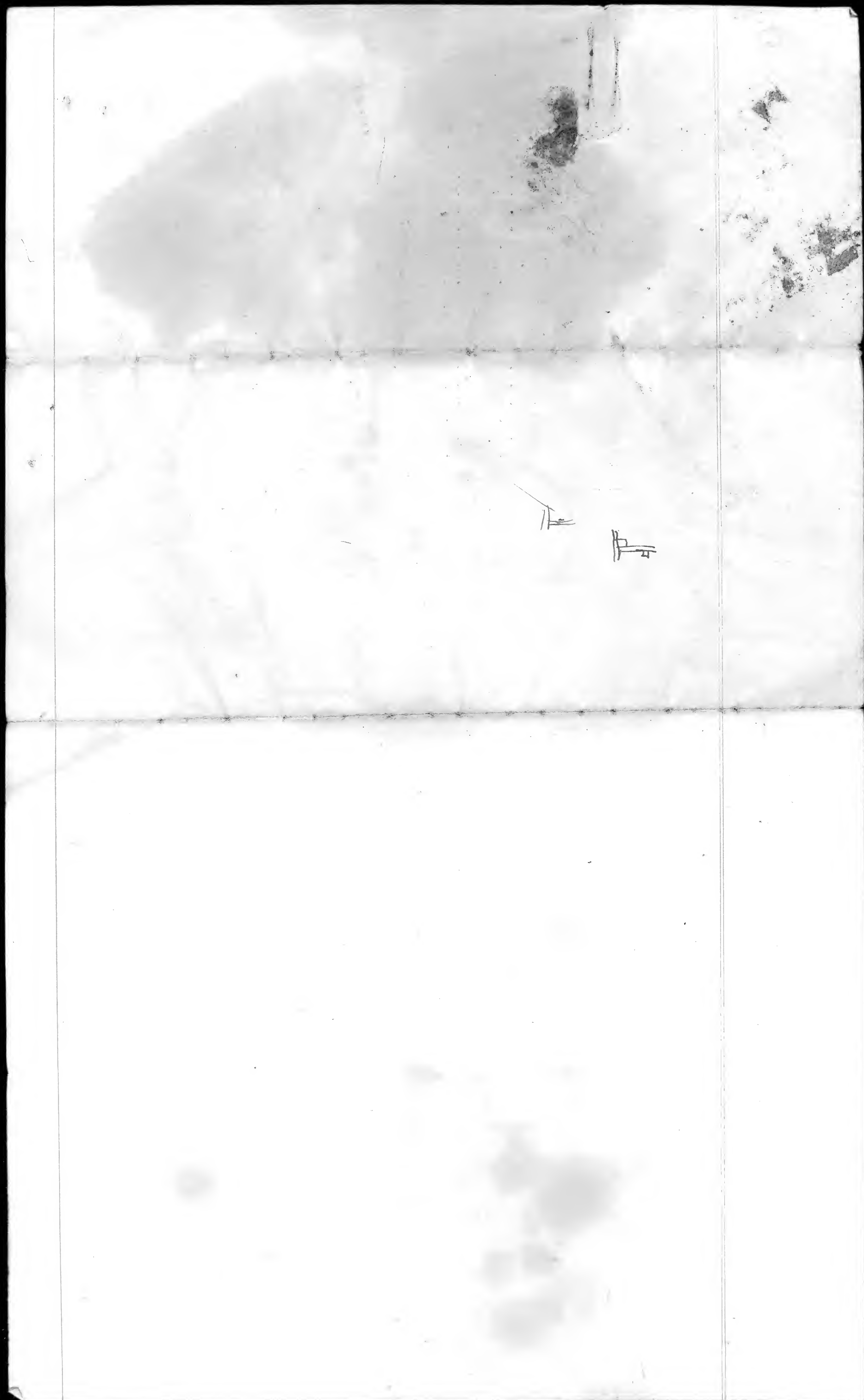
<u>LEAVE</u>	<u>ARRIVE</u>	<u>PLACE</u>	<u>DISTANCE</u>
Wed. 4th. April. -----		Honolulu, T.H.	
-----	Sat. 7th. April.	Laysan Isl.	<u>931⁰ miles</u>
<u>Disembark 8th. April. Sun.</u>			
	(9th. April. Mon.		
	(10th. " .Tues.		
	(11th. " .Wed.		
	(12th. " .Thur.		
	(13th. " .Fri.		
Sat. 14th. April. -----		Laysan Isl.	
-----	Sun. 15th. April.	Midway Isl.	<u>337</u>
Mon. 16th. April. -----		Midway Isl.	
-----	Mon. 16th. April.	Ocean Isl.	<u>56</u>
	(17th. April. Tues.		
	(18th. " .Wed.		
	(19th. " .Thur.		
	(20th. " .Fri.		
	(21st. " .Sat.		
Sun. 22nd. April. -----		Ocean Isl.	
-----	Sun. 22nd. April.	Midway Isl.	
	(23rd. April. Mon.		
	(24th. " .Tues.		
Wed. 25th. April. -----		Midway Isl.	
-----	Wed. 25th. April.	P. & H.	<u>82</u>
	(26th. April. Thurs.		
	(27th. " .Frid.		
Sat. 28th. April. -----		P. & H.	
-----	Sund. 29th. April.	Laysan Isl.	<u>255</u>
<u>Embarks mon. 30 April.</u>			
Tues. 1st. May. -----		Laysan Isl.	
-----	Thurs. 3rd. May.	Honolulu T.H.	<u>931</u>

SECOND TRIP

Mon. ^{Wednes.} 9th. May -----		Honolulu, T.H.	
-----	Wed. / 2th. May.	Laysan, Isl.	
<u>Embarks Thur. 13 May.</u>			
Fri. 14 th. May. -----		Laysan Isl.	
-----	Fri. 11 May.	Lisianski	
	(12 May. Sat.		
	(13 May. Sun.		
	(14 May. Mon.		
	(15 May. Tues.		
	(16 May. Wed.		
Thur. 17th. May. -----		Lisianski	
-----	Fri. 18th. May.	P.F.S.	
	(19 May. Sat.		
	(20 May. Sun.		
	(21 May. Mon.		
	(22 May. Tues.		
Wed. 23rd. May. -----		P.F.S.	
-----	Fri. 25th. May.	Honolulu, T.H.	

THIRD TRIP
ITINERARY

LEAVE	ARRIVE	PLACE	DISTANCE
Tues. 29th. May. -----	Thur. 31 May.	Honolulu, T.H. Necker Isl.	
	(Fri. 1st. June.		
	(Sat. 2nd. "		
	(Sun. 3rd. "		
	(Mon. 4th. "		
	(Tues. 5th. "		
	(Wed. 6th. "		
	(Thur. 7th. "		
Fri. 8th. June -----	Fri. 8th. June.	Necker Isl. Nihoa Isl.	
	(Sat. 9th. June.		
	(Sun. 10th. "		
	(Mon. 11th. "		
	(Tues. 12th. "		
	(Wed. 13th. "		
	(Thur. 14th. "		
Fri. 15th. June -----	Fri. 15th. June	Nihoa Isl. Honolulu, T.H.	



BERNICE PAUAAHI BISHOP MUSEUM
OF
POLYNESIAN ETHNOLOGY
AND NATURAL HISTORY

HONOLULU, HAWAII,

March 28, 1923.

Dr. Alexander Wetmore,
Bishop Museum,
Honolulu, T. H.

Dear Dr. Wetmore:

Since it is the policy of this Musuem
to maintain its ornithology study collections at a minimum
of ten skins of each Hawaiian species, I find that we need
skins of birds likely to be secured on the proposed expedit-
tion of 1923 as follows:

Aestrelata hypoleuca	3
Diomedea immutabilis	2
" nigripes	5
Oceanodroma tristrami	10
Phaeton rubricauda	4
Procelsterna saxatilis	10
Puffinus nativitatis	7
Sterna lunata	10 7
Sula cyanops	7
Sula piscator	3

; If a sufficient number of skins are
secured so that you can spare these, we shall be very happy
to receive them.

Very truly yours,

Stanley C. Ball
Curator of Collections.

SCB:SJ

BERNICE PAUAAHI BISHOP MUSEUM
OF
POLYNESIAN ETHNOLOGY
AND NATURAL HISTORY

HONOLULU, HAWAII.

Dr. Alexander Wetmore:

and

March 28, 1923.

Mr. Reno:

You are invited to lunch at the University Club
Friday, March 30, at 12:15. The meeting is called for the dis-
cussion of details in connection with the Tanager Expedition.

Herbert E. Gregory, Director.

HEG:SJ

TO STUDY BIRD ISLAND LIFE



Dr. Alexander Wetmore, Washington, D. C., and C. E. Reno, Phoenix, Ariz., who arrived on the Matsonia this morning. The two scientists, both representatives of the federal biological survey, will make trip to the Bird island reservation on the mine sweeper Tanager. Bishop Museum experts.

SAVANTS HERE TO MAKE BIRD ISLAND JAUNT

Biological Survey Experts Arrive On Matsonia; Trip to Start Within Few Days

Two members of the party of scientists who will sail from Honolulu about April 1 for the Bird island reservation to study fauna and flora there arrived on the liner Matsonia from San Francisco this morning.

They are Dr. Alexander Wetmore, Washington, D. C., and C. E. Reno, Phoenix, Ariz., both identified with the federal biological survey.

The expedition, which is to sail on the mine sweeper Tanager, under the command of Lieut. Comdr. Samuel King, will make a survey of the small islands which lie to the west of the Hawaiian group and will go as far as Midway. The scientists, according to Dr. Wetmore, will be away from two to four months.

"The birds on Laysan island are well known," Dr. Wetmore said today, "but the plant and animal life and the geological structure of other islands in that region has scarcely been looked into. The conditions on the very small islands in that vicinity are not known at all. We shall try to make a clean-up on this trip."

The work to be undertaken by Reno, who is officially assistant to Dr. Wetmore, will be the eradication of the hordes of rabbits on Laysan. After this task has been accomplished he will assist in the collection of species of birds and mammals.

"I hope to be able to do away with the rabbits by means of poisoned alfalfa leaves," Reno explained today. "I expect to have some luck with this process, but if I find that it is fatal to birds also, some other means will have to be devised."

"We are carrying guns on this trip, and, of course, will use them to some extent. Our firearms, I expect, will put the finishing touches to the job."

One other mainland man, Donald R. Dickey of Pasadena, Calif., a motion picture camera operator, will arrive Saturday on the City of Los Angeles to join the expedition.

Dr. Herbert E. Gregory of the Bishop Museum said today that he has not decided what scientists from that institution will make the trip or exactly when it will start. "We are having a meeting today and will be able to make a definite announcement by the end of this week, I hope," he said.

'PEP MAN' HERE FOR 4 LECTURES

H. J. Wisehaupt Arrives On
Matsonia; Will Talk
On Salesmanship

Frequency in advertising makes for success in business, according to Howard J. Wisehaupt, the "pep" man, and authority on salesmanship and personal development, who arrived from San Francisco on the Matsonia this morning for a series of lectures in Honolulu.

"If you are going to advertise your business really, advertise in a wholehearted way," said Wisehaupt. "It will pay to be frequent in your advertising. If you don't won't to take much space at a time, use a smaller amount of advertising more frequently. Instead of using a full page at one time, use four quarters in different sections of the newspaper or publication you planned to advertise in."

Wisehaupt, who is accompanied by his secretary, F. C. Drake, has come to Honolulu for a series of lectures on salesmanship under the auspices of the Retail Board of the Chamber of Commerce of Honolulu. Four lectures will be given at the Mission Memorial Hall, beginning this evening at 7:45 with a talk on "Success or Failure?" No admission will be charged.

Wisehaupt recently completed a tour of the United States and Canada. He visited 67 cities and has made a careful study of the reasons why businesses fail.

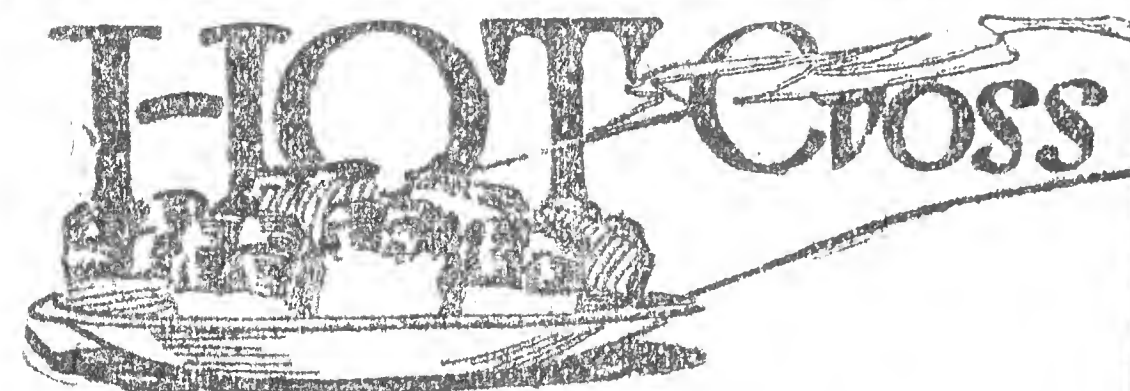
"All my studies lead me to believe that the failure of any business is due to some individual," said Wisehaupt. "It may be the clerk, manager or owner of the business. Sometimes it is lack of courtesy to the customer, inferior goods, lack of personality, salesmanship, etc. There were from 200 to 600 failures a week in the United States during 1922 and most of these failures were due to some individual."

FRIENDSHIP CREED URGED BY HUGHES

(Associated Press by Naval Radio)
WASHINGTON, March 27.—Secretary of State Hughes sent a message to the fifth Pan-American conference at Santiago, Chile, pleading that the nations apply themselves forcefully to the task of removing every remnant of suspicion, distrust and hatred, and earnestly seek the cure of their ills, "which will be found only in friendship and good faith."

JAPAN TO GUARANTEE

CQ
Y/H



Big and Delicious
50c a Do

THURSDAY, FRIDAY, SATURDAY

C. Q. YEE HOP &

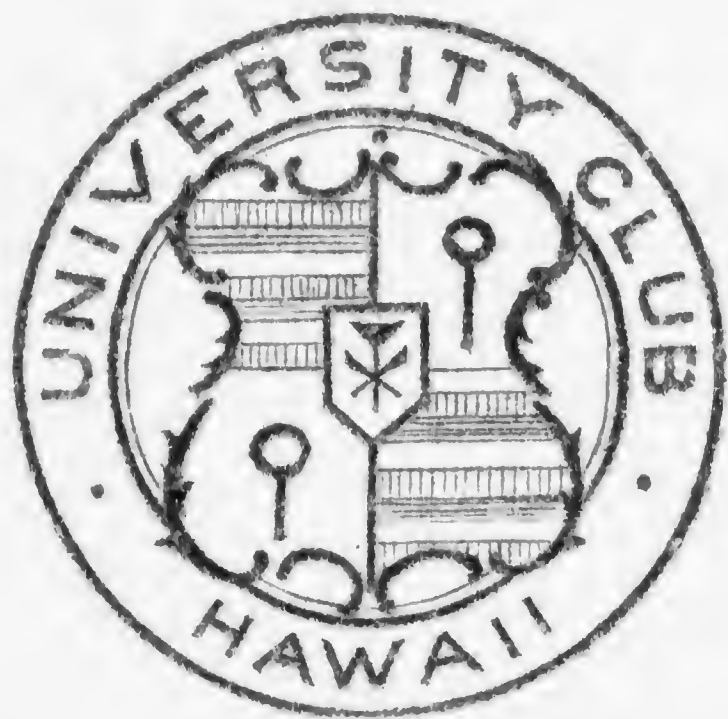
CQ
Y/H

QUALITY BAKERS

125 N. King St.

Wilhelmina Pass

SAILING TOMORROW



Honolulu March 27/1923

The privileges of the
University Club
are extended to

Mr. Alexander Wetmore

for the period of three weeks

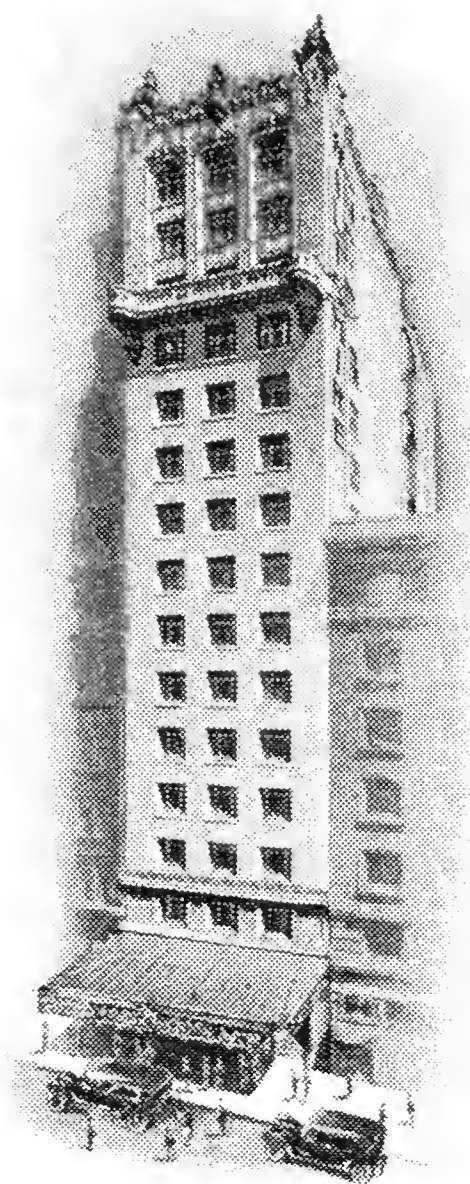
Ed Sullivan

Secretary

At the request of Dr. H. E. Gregory

To Maxon.

The Biological Survey of the U. S.
Department of Agriculture, ~~in cooperation~~
~~with~~ ^{and} ~~the~~ Bishop Museum of Honolulu
~~in cooperation with the Navy Department,~~
~~have~~ arranged with the Navy
Department for transportation for
a party of scientists who will ^{during the present spring ~~season~~}
make a general survey of the
plant and animal life of ^{on the}
~~series~~ ^{chain} of islands extending from
Nihoa in the Hawaiian group
to Midway and Wake. Alexander
Wetmore of the Biological Survey
will have general direction of the
scientific activities of the expedition
~~and will~~ which will be carried
on in part by ~~men~~ members of the
staff of the Bishop Museum in Honolulu.
Mr. Donald R. Dickey of Pasadena will



MARINE VIEW
IN THE HEART OF THE SHOPPING DISTRICT

Wiltshire Hotel

SUPERIOR ACCOMMODATIONS

340-346 STOCKTON STREET

AT UNION SQUARE

LEO. LEBENBAUM, MANAGER

San Francisco, Cal., _____ 192_____

accompany the party to secure moving
pictures of the remarkable breeding
colonies of sea birds of on
Laysan Island.

4-3-23

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

March 21, 1923.

O-P

Dr. Alexander Wetmore,
C/O Bernice Pauahi Bishop Museum,
Honolulu, Hawaii.

Dear Dr. Wetmore:

I am inclosing a letter received from your friend,
Waldo L. Schmitt, in which he asks you to pick up a few
more things. I have told him that you will doubtless be
glad to pick up at least a few of such specimens as he desires,
if you get his letter in time.

I have seen no letter from you since you left, but
noted your telegram a few days ago to the effect that you
expect to sail today.

With all good wishes, I remain,

Very truly yours,

Edward A. Preble

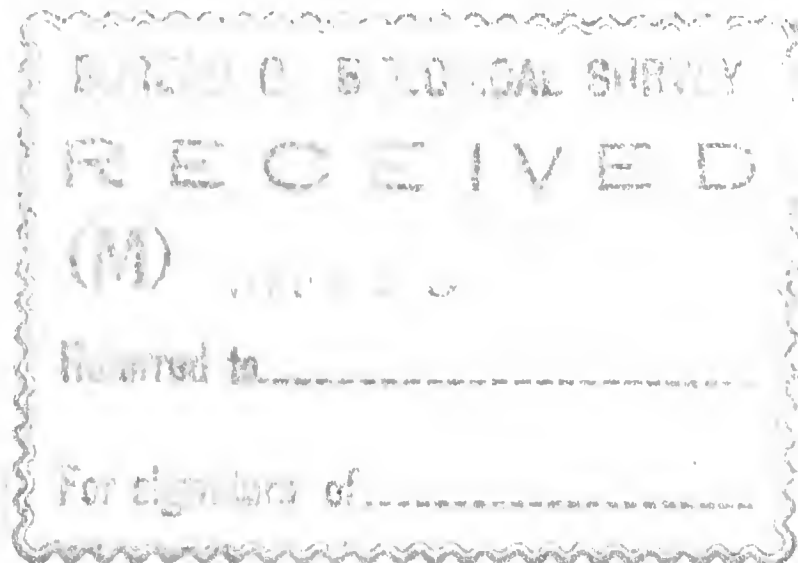
In Charge,
Biological Investigations

Inclosure 20771.

SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

WASHINGTON, D. C.



March 13, 1923.

Dr. Alexander Wetmore,
U. S. Biological Survey.

My dear Wetmore:

I understand that you are leaving some time this week, and for fear that you will get out of town before I can impose upon you with a few requests for invertebrates, I am sending you this note.

Of course, you have many other varied projects in view, but if you can ever spare a few moments, will you not pick up whatever common beach invertebrates that may come your way. One of the easiest ways of getting extremely valuable invertebrate material is to just shake out a bunch of sea-weed in fresh water, or in salt-water, to which a little formalin has been added. For the time taken in such collecting, the returns are exceedingly valuable. As you may well know, the least conspicuous invertebrates, those usually associated ^{with} sea-weed, are the least known, hence the rarest in collections.

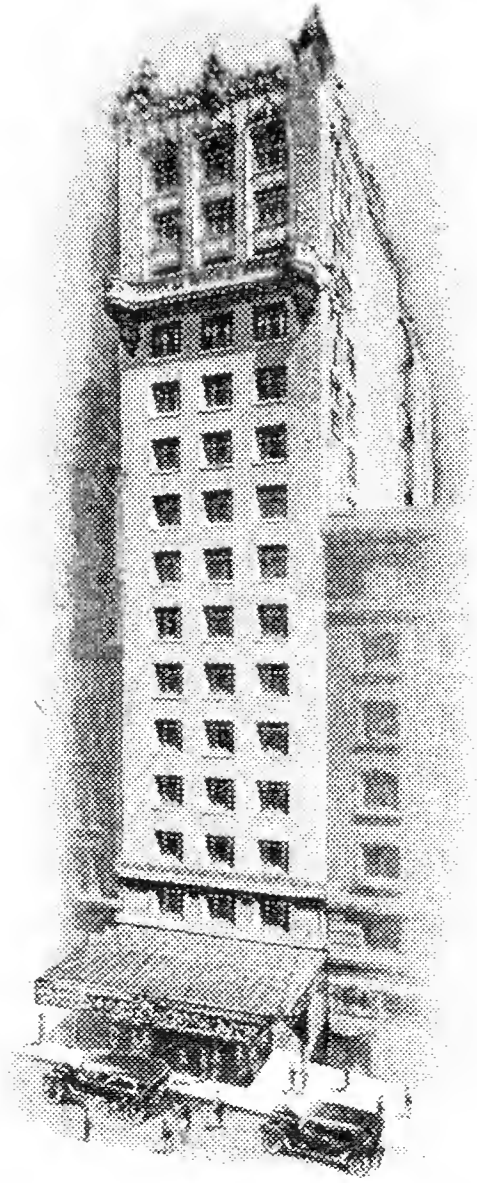
Two or three small bottles of such washings are worth much more than a great many of the larger, common things which are usually picked up by collectors.

Mr. Shoemaker, in particular, is anxious to get amphipods, and they too are very plentiful in sea-weed washings.

I hope that you will be able to spare us a few moments for the gathering in of some of these sea-weed washings, but whether or no, the best of good luck to you, and all success to your Expedition.

Sincerely,

WLS:C



Wiltshire Hotel

SUPERIOR ACCOMMODATIONS

340-346 STOCKTON STREET

AT UNION SQUARE

LEO. LEBENBAUM, MANAGER

MARINE VIEW

IN THE HEART OF THE SHOPPING DISTRICT

San Francisco, Cal., 3/16 1923

Dear Doctor Wetmore:

Arrived in city
this A.M. and am
stopping with my sister
at 730 Powell, Apt 5,
Telephone Douglas
6695. Will call
you at 2:30 P.M.

Very truly yours,
Harold P. Allen

3-16-23

DONALD R. DICKEY
514 LESTER AVENUE
PASADENA, CALIFORNIA

March 8,
1923.

Dr. Alexander Wetmore,
Wiltshire Hotel,
420 Stockton Street,
San Francisco, California.

My dear Wetmore:-

Your letter of March 2 finds me back at the desk and rushing preparations for Laysan. I have done my best to meet the advance in schedule halfway, and am catching, God willing, the City of Los Angeles, sailing from San Pedro on March 24th, and arriving in Honolulu on March 30th. That means that if worse comes to worst, and the Navy really sails on the revised schedule, I can still make the grade in some sort of fashion without delaying matters.

As soon as you get this, drop me a line as to your Honolulu headquarters. I will be at Hotel Halekulani, Waikiki Beach, March 31st, and will expect word as to what has developed unless I hear in the interim.

Looking forward with keenest interest to the birds, and joining you in fear of old mal-de-mer, I am

Very truly yours,

Donald R. Dickey

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C.

TELEGRAM.

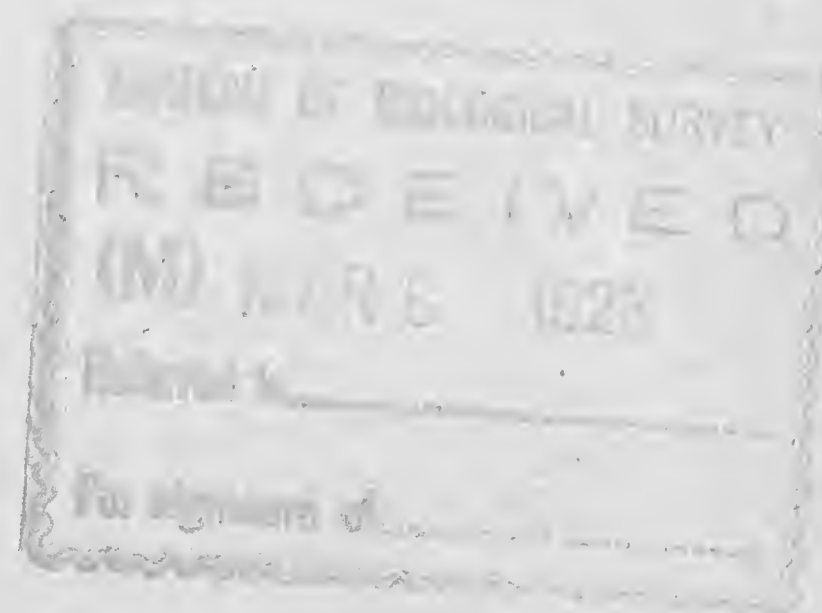
bl4wukr 28 Nite. 942a.m. 8.

✓
Pasadena, Calif., March 7, 1923.

Alex. Wetmore,
Biological Survey,
Washn.

Do not fail to include Los Angeles in itinerary of Laysan trip one
way or both ways glad to have you my guest while here bring Murphy with
you

J. E. Law.



UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON

March 3, 1923.

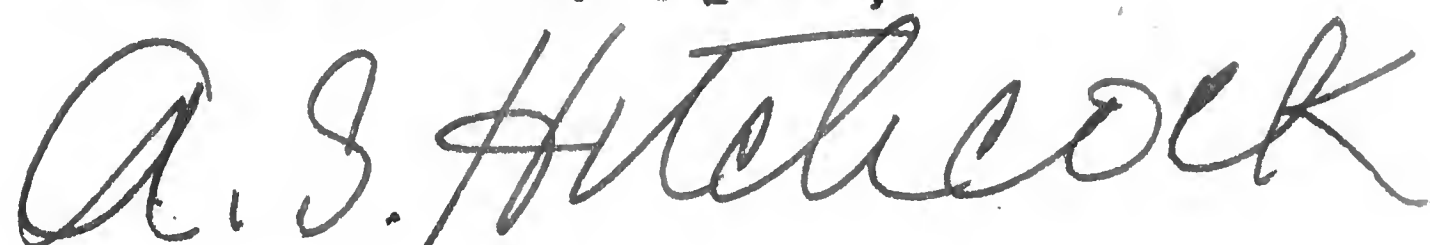
ECONOMIC AND SYSTEMATIC BOTANY

Mr. Alexander Wetmore,
Biological Survey,
Washington, D. C.

Dear Mr. Wetmore:

I understand that you are to make an expedition to the outlying islands of the Hawaiian group. Should it be convenient for you, I wish you would get collections of the grasses of these islands. In 1916 I spent several months in the Hawaiian Islands studying the grasses. My report on the grasses was published as a Memoir from the Bishop Museum 8: 101-230. 1922. Our information concerning the grasses of the outlying islands was very meagre. I should like very much to supplement the report by an examination of more specimens from these small islands. Anything that you can do in this way would be greatly appreciated.

Very sincerely yours,



A. S. Hitchcock, Botanist In Charge of
Systematic Agrostology, Bureau of Plant
Industry.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

March 2, 1923.

O-P
Travel Instr.

Dr. Alexander Wetmore,
Assistant Biologist,
Bureau of Biological Survey,
Washington, D.C.

Dear Dr. Wetmore:

In accordance with your Letter of Authorization No. 131-Bi, you are directed to proceed on or about March 10, 1923, from Washington, D.C. to San Francisco, California. En route, you will stop for one day at Lawrence, Kansas, for the purpose of securing needed equipment for your forthcoming trip; and at Denver, Colorado, to consult with Mr. A. M. Bailey, of the Colorado Museum of Natural History, who can give you reliable information on conditions that you will encounter in the Hawaiian Island Bird Reservation. In addition, if time permits, you should see Dr. W. K. Fisher, Director of the Hopkins Marine Laboratory, at Pacific Grove, California. Dr. Fisher is cognizant of conditions on Laysan Island and may give you valuable information. From San Francisco, you will continue to Honolulu, where, in cooperation with officials of the Bishop Museum, you will embark on a scientific survey of the smaller islands of the Hawaiian group, including Wake and Johnston Islands. Detailed instructions covering this work have been furnished you in other letters and memoranda. Upon completion of the work indicated, which will occupy a period of four months or more, you will return to your official station, Washington, D.C.

Very truly yours,

W C Henderson

Acting Chief of Bureau.

Seymour R. Gross

MERCHANDISE BROKER

*Rabbit extermination
wants first chance at Hawaiian
Is.*

ROOM 75
196 MARKET ST.

NEWARK, N. J.

Dr. M. M. M. M.

Mr. Goss -

Investigate Rabbit
Candlers in
Hawaii - Is
a good lot of
piled up goods
extermination -
Let him know

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

No. 020 -Bi.

ALLOTMENT, AND INCREASE OR DECREASE.

February 28, 1923.

Mr. Alex. Wetmore,

Assistant Biologist.

Dear Sir:

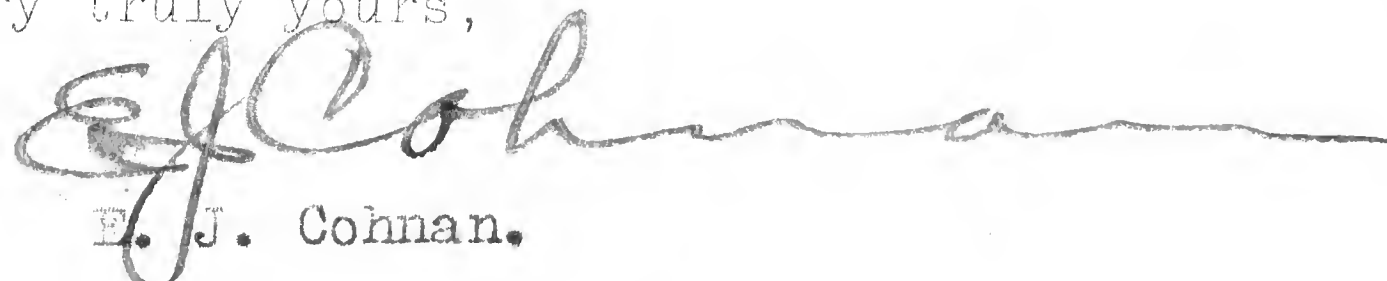
By direction of the Chief, Bureau of Biological Survey, the sum of
\$ 25.43 has been deducted from the amount allotted for expenditures
under the appropriation "General Expenses, Bureau of Biological Survey, 1923,"
SYMBOL NO. 4 (Bird Refuges) , during this fiscal
(Show this number on each account charged hereto.)
year, under Letter of Authorization No. 98 -Bi., dated July 1, 1922.

This is for the ~~EXPOSED~~ reason that the above amount has been transferred
to "Requisitions" (Symbol 4) to cover purchase of supplies for the Hawaiian
expedition.

Deduct 3rd Quarter.

You will be held responsible for compliance with the terms of your Letter
of Authorization and for keeping within the amount of your allotment. IF YOUR
TOTAL ALLOTMENT IS EXCEEDED WITHOUT PREVIOUSLY OBTAINED WRITTEN AUTHORITY OF
THE CHIEF OF THE BUREAU, THE EXCESS WILL NOT BE MET BY THE BUREAU, UNLESS
(1) THERE IS MONEY AVAILABLE FROM THE PROPER APPROPRIATION AND (2) A SATIS-
FACTORY EXPLANATION IS MADE FOR FAILURE TO SECURE IN ADVANCE THE NECESSARY
INCREASE.

Very truly yours,


E. J. Cohnan.

In Charge of Accounts.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

No. 134-Bi

LETTER OF AUTHORIZATION (AMENDMENT)

Washington, D. C., February 27, 1923.

Alexander Wetmore,

Assistant Biologist.

Your letter of authorization No. 131-Bi, "General Expenses, Bureau of Biological Survey, 1923", is hereby amended so as to authorize reimbursement, as a consideration for their use, to yourself and your assistant, Charles E. Reno, of expenses incurred in the necessary repairs of your and his own firearms if damaged while being used for official purposes.

Your permanent headquarters will be Washington, D. C.

Very truly,



8-3473



Acting

Chief of Bureau.

Special Agent in Charge Assistant.



U. S. DEPARTMENT OF AGRICULTURE

Office of the Secretary

Press Service



Dr. Wetmore

Released for publication, Friday morning papers, February 23, 1923.

WILL EXPLORE ISLANDS IN
HAWAIIAN BIRD RESERVATION

Plans for a cooperative scientific expedition to the islands of the Hawaiian Islands National Bird Reservation have been perfected by the Bureau of Biological Survey, United States Department of Agriculture, with the Bishop Museum, of Honolulu. The start will be made from San Francisco, about March 21, the Navy Department cooperating by furnishing a 1,000-ton vessel for conducting the party from Honolulu to the various islands.

Dr. Alexander Wetmore, of the Biological Survey, will be in charge of the expedition, assisted by Charles E. Reno, of the same bureau. The work of the Biological Survey will be to make collections and gather information concerning the bird life of the islands, and to destroy a large colony of rabbits that has become established on one of the islands to the detriment of some of the land birds through the destruction of the scanty vegetation there.

The magnitude of the expedition's task may be appreciated when it is understood that the Hawaiian Islands Reservation consists of a dozen or more islands, reefs, and shoals that stretch westward from the Hawaiian Archipelago proper for a distance of more than 1,500 miles toward Japan, and that the average distance between these is something like 100 miles.

Included in the refuge is Laysan Island, celebrated as a breeding place for albatrosses and other sea birds, where in the past plumage hunters of other nations have committed serious depredations. Domestic rabbits were introduced on the island some years ago by a German who was then living there. The increase of these animals threatens to destroy what little vegetation there is on the island, and with its disappearance several species of small land birds peculiar to Laysan would perish.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

Jacksonville, Fla.,
February 20, 1923.

Dr. Alexander Wetmore,
Biological Survey,
Department of Agriculture,
Washington, D. C.

Dear Dr. Wetmore:

I am sending you the Permit for collecting birds on the Hawaiian Reservation which I omitted to supply before leaving Washington. It may be of service to you in avoiding a surplus of volunteers when you get to Honolulu. I omitted to speak of the Warden of the Reservation who lives in Honolulu and who, if he desires to go to Laysan on the boat ought to be taken along in order that he may get a first-hand knowledge of existing conditions. The main usefulness for a warden stationed permanently at Honolulu, is in keeping track in a general way, ^{with} ~~of~~ what is taking place on the Reservation. I think it is worth the small salary we are allowing for the purpose.

Another matter concerning which I failed to speak in my general instructions is the necessity for you to observe closely and get all the information you can concerning any possible temporary or semi-permanent^{*} occupation of any of the islands in the Reservation by Japanese or other fishermen. There has been persistent effort through quite a number of years to secure permission for the establishment on certain islands of Japanese fishing stations. This has been refused each time it has come up but the question has arisen in my

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

mind as to whether the Japs may or may not be using the Islands more or less without definite permission. Should there be any signs of this and especially if any structures of any kind have been erected on any of the islands, I wish you would not fail to secure photographs of them and to take measurements and give a full description. Also learn, if possible, to whom they belong. Take up the matter with the Captain of your boat and later with the Commandant of the Naval Station at Pearl Harbor, as such occupation will be absolutely illegal and must be stopped. Should you find anything in the way of occupation please make a separate and confidential report containing all the information you can secure concerning it on the islands as well as at Honolulu. Prof. Gregory can undoubtedly help you at Honolulu in this matter.

I presume it is scarcely necessary for me to suggest that you take with you a very full supply of films in air tight containers and that you carry along adhesive tape to seal the containers after you have made your exposures and have dried out the container and the film before sealing them in order to prevent their taking moisture and deteriorating. It would be well, however, for you to take along a developing apparatus in order to check up your exposures to see that your results are all right, in view of the intense light which will prevail on all of the islands, except possibly where you are taking forest views after you return to Honolulu. I trust you will secure a very fine lot of pictures covering all stages of bird life as well as giving the characteristic views of the

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

islands as well as their vegetation.

Another matter that special note should be made of is the location of any fresh water on any of the islands where it occurs. A rough sketch map should be made in your notes with the landing point and the approximate distance and character of the water and its amount.

I trust that the Sanford matter has been satisfactorily adjusted so that you will be relieved of that part of the detail thus leaving you free to devote yourself more exclusively to the purposes of the Bureau. I anticipate a superb lot of specimens and other results.

With best wishes for the trip, I remain,

Sincerely yours,

A handwritten signature in cursive script, reading "E. W. Nelson". The signature is fluid and elegant, with the first letters of each word being capitalized and prominent.

Chief of Bureau.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

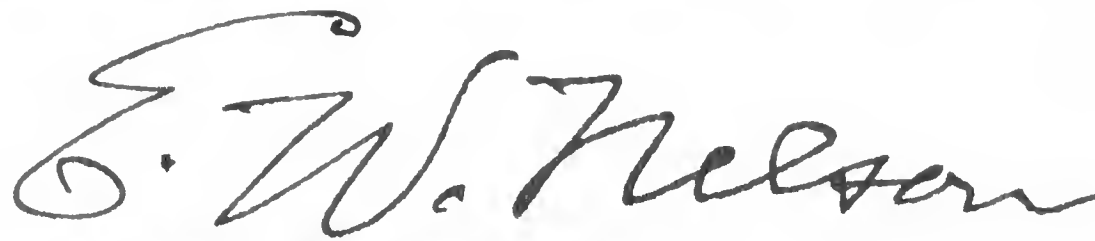
February 20, 1923.

PERMIT TO COLLECT BIRDS

In The

HAWAIIAN ISLAND BIRD RESERVATION.

This Permit authorizes Dr. Alex Wetmore
and the assistants designated by him for the purpose, during
the year 1923, to collect specimens of birds for scientific
purposes in the Hawaiian Island Bird Reservation.


Chief of Bureau.

William Ellery,
President

Phone Douglas 4646.

The Ellery Arms Company

MAIL ORDER DEPARTMENT
ILLUSTRATED CATALOGUES FREE

MANUFACTURERS AND OUTFITTERS
FOR THE SPORTSMAN, CAMPER AND ATHLETE
EQUIPMENT AND APPARATUS FOR EVERY NEED.

583-585 MARKET ST.

SAN FRANCISCO, CAL.

February 19, 1923.

Mr. Alexander Wetmore, Assistant Biologist
U. S. Department of Agriculture,
Bureau of Biological Survey,
Washington, D. C.

Dear Sir:

Your reference: O*Prop*Quot.

We are in receipt of yours of the 15th inst. and are pleased to quote you the following net prices -

22 short smo. ctgs	\$ 4.16 per M
16 ga. loaded shells, High Base, 6ch.	42.74 per M
16 ga. loaded shells, low base, 6ch..	39.37 per M
(8 ch same price as for the 6ch)	

These goods are in stock here now and will be on March the 16th. We hope to be favored with your order.

Yours very truly,

THE ELLERY ARMS COMPANY.

B.



Telephone Vanderbilt 4800

C O P Y

HOTEL CHATHAM,

Vanderbilt Ave. 48th & 49th Sts.,

February 19, 1923.

Dr. E. W. Nelson, Chief,
Bureau of Biological Survey,
Washington, D.C.

Dear Sir:

The matter of the projected trip to the Leeward Islands, including Laysan, of the Pacific, has been so thorly discussed by us in recent conference in Washington as to leave but little for confirmation save my own acceptance of your full letter of February 10, 1923. I heartily concur with and fully understand each provision and recommendation of your (afore-said) letter. I note only one omission that should, perhaps, be recalled to you. It is understood that I go in full charge of the cinematographic phase of the expedition, and therefore (for the best interests of all concerned) without the competitive interference of other "movie" interests. This will be my sole charge, and in carrying out its details I shall, of course, hold myself strictly accountable for orders to your Dr. Wetmore. In all other specified respects, I accept your letter of the above date and have already engaged passage that will put me in Honolulu early in the first week of April as per your earlier telegraphic instructions.

With kindred hopes for the success of the expedition, I remain

Sincerely,

(signed) Donald R. Dickey.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY,
AND REFER TO

February 18, 1923.

MEMORANDUM FOR DR. WETMORE.

Dear Dr. Wetmore:

In thinking over the matter of the contribution from Dr. Sanford to the Hawaiian expedition I have decided that in view of the willingness which he repeatedly expressed to me to have his participation canceled it will be best for you to draw your check for the \$1200 and inclose it in a letter which I am sending Sanford. The letter will be prepared and will be sent as soon as your check is ready to inclose. The matter will be left in Mr. Henderson's hands to handle.

During your trip of course you will not fail to secure a good substantial series of all of the land birds peculiar to the various islands you visit and also of desirable seafoal, especially those which are scantily or not at all represented in our collection. We should have enough material of this kind so that a few specimens at least will be available for exchanges to secure equally valuable material from other areas.

Sincerely yours,

E. W. Nelson

E. W. C. H.

Chief of Bureau.

Dictated by Dr. Nelson
but signed in his absence.

BUREAU OF BIOLOGICAL SURVEY

Feb. 12, 1923

Received from Dr.
E. W. Nelson the sum
of Twelve Hundred dollars
(~~\$1200.00~~) ^{2⁰⁰} in the form
of a check from Dr. L. C.
Sanford, this sum to
be used for expenses in
connection with the Hawaiian
Island Reservation Expedition.
Alex W. Nelson

What returned; I found this in my safe
deposit box and returned it to its
author —

Ed. T.

(This money was not used, but
was returned to Sanford.)
A.W.

Dr. Sanford wanted me to take an extra
man to prepare a set of skins for him. I found
however that \$1200 would not cover the expense
so Dr. Nelson cancelled the arrangement. The
money was returned to Sanford.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

No. 131-31

LETTER OF AUTHORIZATION

Washington, D. C., February 16, 1923.

Dr. Alex. Wetmore,

Assistant Biologist.

On or about March 15, 1923, you are authorized to proceed to San Francisco, California and thence to the Hawaiian Islands in connection with an expedition authorized for the purpose of making a scientific examination of islands in the bird reservation and in neighboring waters to secure detailed information concerning the present condition of bird life there, and other facts of value.

You are further authorized to make purchase in Washington, D. C., San Francisco, California, and elsewhere of such special supplies, and to hire such temporary laborers and other assistants, as may be necessary to the proper prosecution of your work.

The provisions of the Fiscal Regulations requiring subvouchers are waived as regards this expedition.

You will be accompanied on the expedition by Charles E. Reno, who will act as your assistant, and whose main duty will be the extermination of the rabbits on Laysan which threaten the vegetation of that island.

You will be allowed actual and necessary traveling expenses from Washington, D. C. to the Hawaiian Islands and the regions of such islands as you visit and return to Washington, D. C.

During your absence, on this expedition, from your official station, Washington, D. C., you will be allowed actual subsistence expenses not to exceed \$5.00 per day.

Your assistant, Charles E. Reno, will be allowed actual and necessary traveling expenses from Phoenix, Arizona, to the Hawaiian Islands and the regions of those islands required to be visited and return to Phoenix Arizona.

He will be allowed actual subsistence expenses not to exceed \$5.00 per day while away from his official station, Phoenix, Arizona, on this expedition.

Approved:

C. W. PUGSLEY

Acting Secretary of Agriculture.

Your permanent headquarters will be Washington, D. C.
A true copy:

C. W. Pugsley

x-3473

Chief Clerk and Executive Secretary

W. C. Henderson

Acting Chief of Bureau.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

No. 607 -Bi.

ALLOTMENT, AND INCREASE OR DECREASE.

February 16, 1923.

Dr. Alex. Wetmore,
Assistant Biologist.

Dear Sir:

By direction of the Chief, Bureau of Biological Survey, the sum of
\$ 1255.00 has been ~~the amount~~ allotted for expenditures
under the appropriation "General Expenses, Bureau of Biological Survey, 1923,"
SYMBOL NO. 4 (Bird Refuges) (Show this number on each account charged hereto.), during this fiscal
year, under Letter of Authorization No. 131 -Bi., dated February 16, 1923.

This is for the purpose of covering expenses of an expedition to the Hawaiian
Islands Bird Reservation including the expenses of assistants.

Liabilities may be incurred against this amount not to exceed

3rd Quarter	\$1000.00
4th "	255.00

Unexpended balance may be carried forward into the following quarter, but
no balance can be carried beyond the fourth quarter, ending June 30, 1923.

1229.57

You will be held responsible for compliance with the terms of your Letter
of Authorization and for keeping within the amount of your allotment. IF YOUR
TOTAL ALLOTMENT IS EXCEEDED WITHOUT PREVIOUSLY OBTAINED WRITTEN AUTHORITY OF
THE CHIEF OF THE BUREAU, THE EXCESS WILL NOT BE MET BY THE BUREAU, UNLESS
(1) THERE IS MONEY AVAILABLE FROM THE PROPER APPROPRIATION AND (2) A SATIS-
FACTORY EXPLANATION IS MADE FOR FAILURE TO SECURE IN ADVANCE THE NECESSARY
INCREASE.

Very truly yours,

E. J. Cohnan.

In Charge of Accounts.

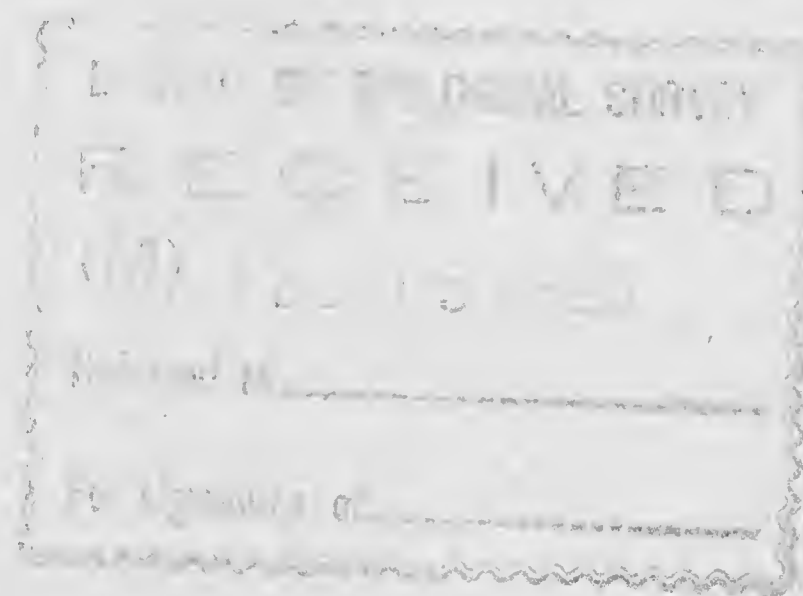
U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C.

Feby 15, 1923

TELEGRAM. 4wus 914-a 10 collect Nite

ZK Lawrence, Kas Feb 14, 1923

Dr. Alex Wetmore,
Biological Survey,
Washington.



Leave turned down by board Stirton free can go.

Bunker

February 15, 1923.

O-Prop-Quot.

Ellery Arms Company,
583 Market Street,
San Francisco, California.

Dear Sirs:

About March 16, 1923, I expect to be in San Francisco to outfit for an expedition to certain Pacific islands. Will you be in a position to furnish the following lots of ammunition at that time:

- 15,000 - 22 calibre shorts loaded with smokeless powder,
- 1,250 - 16 gauge shotgun shells, loaded with No. 6 chilled shot,
- 1,250 - 16 gauge shotgun shells, loaded with No. 8 chilled shot.

The shotgun shells should be loaded with Ballestite smokeless powder, preferably with twenty grains of powder to an ounce of shot. I shall appreciate an immediate reply, giving me a quotation on this ammunition with the usual discount that you allow to purchasers for Government use.

Should it happen that any of these items are not to be obtained at this time in San Francisco, please advise immediately by wire, collect.

Very truly yours,

Assistant Biologist.

AW-bp

Carbon for Dr. Wetmore

February 15, 1923.

Professor H. H. Gregory,
Bishop Museum,
Honolulu, Hawaii.

Dear Professor Gregory:

I am sending you herewith a carbon copy of an order just issued by the Navy Department covering the detail of the mine sweeper to carry out the scientific survey of the islands. You will note that Wake and Johnston Islands are included, and that the period is extended to cover from three to four months. I hope that this will enable you and Dr. Wetmore to arrange an itinerary that will not only cover the islands in the reservation but those outside, including Wake, from which I anticipate we will have most interesting results.

In accordance with our mutual understanding and also that we have with the Navy Department, it is desired that you arrange so far as can be done, for the details of the itinerary of the expedition without waiting for Dr. Wetmore's arrival, but with the following points in view. The stops at the smaller islands will necessarily be rather brief and the delay there will probably be mainly in order that the men from the Bishop Museum can carry out their investigations, since the bird work on these islands can be done in a very short time. In making the arrangements it should also be kept in mind it is desired to have the Biological Survey party on Laysan for about a month. During this period the Bishop Museum men will, no doubt, desire to carry on work on other islands, which however, should each be visited by a representative of the Biological Survey in order that we may have a detailed account of the present condition of the bird life in every instance.

The trip to Wake, Johnston and any other islands outside the reservation should, I think, be made after the completion of the work on Laysan.

With best wishes for the greatest success for the trip, I remain

Sincerely yours,

Chief of Bureau.

HW/ewe
Incl. 15776

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

COPY.

DEPARTMENT OF AGRICULTURE
Office of the Secretary,
Washington.

February 14, 1923.

Dr. E. W. Nelson,

Chief Bureau of Biological Survey.

Dear Dr. Nelson:

Approval has been given to the recommendation contained in your memorandum of February 13, 1923, that Dr. Alexander Wetmore and an expert rodent control man, of your Bureau, accompany an expedition to the Hawaiian Islands to make a scientific examination of the islands in the bird reservation and neighboring waters in connection with bird life there.

The acceptance of the cooperative contribution of \$600 from the National Research Council is authorized, and the provisions of the Fiscal Regulations requiring sub-vouchers are waived in their application to this expedition.

Sincerely,

(Signed) W. A. Jump.

Administrative Assistant.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

WASHINGTON, D. C.

February 13, 1923.

ADDRESS REPLY TO
CHIEF, BUREAU OF BIOLOGICAL SURVEY.
AND REFER TO

Dr. Alexander Wetmore,

Assistant Biologist.

Dear Doctor Wetmore:

You are hereby made the leader of the cooperative Biological Survey - Bishop Museum scientific expedition to the Hawaiian Island Bird Reservation and outlying islands. You will have charge of the scientific operations and photography, and arrangements for stopping on the different islands, landings, and other work of that kind from the ship will be arranged by the scientific staff through you as its head with the officer in command of the ship. Independent individual arrangements should not be permitted since that would interfere with the unity of action and might result in friction and embarrassment. It is most desirable that everything should go on with the utmost harmony in order that the Navy might be pleased with the work and personnel and thus favorably disposed toward other possible similar expeditions.

Promptly on arrival at Honolulu you will get in touch with Professor Herbert E. Gregory, Director of the Bishop Museum and confer with him as to the details of the trip and the personnel which he desires to send representing the Bishop Museum. You should also accompany Professor Gregory for a conference with the Commandant of the Pearl Harbor Naval Station in order that the three of you may work out definitely the plans for the itinerary of the trip, the matter of accommodations, and the storage and working quarters on board the mine-sweeper which the Navy Department has allotted for this expedition.

The bird collection made on this trip will be wholly under your direction and all the birds taken placed in your charge. All of the specimens are to be sent to the Biological Survey with the exception of the limited number of specimens which will be delivered to Professor Gregory for the Bishop Museum to fill gaps in its collection. What these gaps are will be determined by you and Professor Gregory at the museum on your arrival in Honolulu, and so far as can be done without depriving our collection of specimens, which are considered very necessary, you will try to fill for him. From Professor Gregory I understood that the number they will desire is very limited.

You have a copy of Dr. Murphy's letter from the American Museum specifying the list of birds desired for their collection through Doctor

Sanford's contribution to the expenses of assistants. You will make every effort to first secure as nearly as possible the full list of the specimens desired for the study series of the American Museum as set forth in Doctor Murphy's letter. In addition, so far as opportunity provides, you should secure specimens to complete the further requirements in Doctor Murphy's list.

You should make a special effort to get two or three representatives at least of the immature plumages of each of the species breeding on the islands and also three or four sets of eggs of each, where it is practicable.

In connection with the collecting on the islands I desire to call your attention to the need of carefully supervising the taking of the rare land species peculiar to each island which may exist there in so small a number as to large a collection of these birds might endanger them. That is a matter for your judgment to determine. Where these peculiar species of land birds exist in sufficient numbers I would like to have for our collection a good working series. In the matter of the Laysan Teal, the number which you should take will depend upon the number on the island. It has been reported that thirty or forty of them were seen there at one time not long since. Another report gives the number as two individuals. Should the former report be true and any considerable number exist, you should take a generous number of them for the collections, owing to the danger of these birds being exterminated, but be sure to leave enough so that there will be reasonable certainty the birds will have opportunity to reproduce next spring and thus renew the number.

Apparently Wake Island is of considerable size and the bird fauna is but little known. While there you should make a special effort to get a good substantial series of everything not occurring on Laysan, from albatrosses to any land birds. Any land birds occurring there are probably peculiar to the island and special effort should be made to get a series of them. It will be well to make a special search here for the Pacific seal which is likely to occur. These seals are also found occasionally on Laysan and whenever you have opportunity you should not fail to get specimens of them. Should you be able to do so you ought to secure at least ten specimens. They are so rare and live in such a remote region that they are almost unknown in scientific collections. Efforts should be made to secure adult specimens with one or two of the small young to represent that stage of development. Should the species not be represented in the Bishop Museum and you secure enough so that an adult could be spared for them you could turn one over to Professor Gregory.

Mr. Donald R. Dickey will accompany the expedition at his own expense to take moving and still pictures. You should do everything in your power to facilitate his work. He will supply the Biological Survey with copies for its use. He will probably desire to return direct from Laysan after completing his pictures there. This should be provided for if possible on any boat returning during the progress of the expedition.

The collections made in all other branches of science by the men from the Bishop Museum will be the property of the Bishop Museum. Professor Gregory has informed me that they will try and collect duplicates of many things of which the Biological Survey will receive a set. This will be very acceptable, particularly a duplicate set of plants if they can be obtained conveniently. In view of the collection of bird stomachs you will make to determine the food of the birds, the plants will be extremely useful. The same might be said of the insects. We shall, however, have no definite claim on any of these collections beyond what is turned over to us voluntarily by the museum.

You are at liberty to arrange with Professor Gregory to write an introductory itinerary of the trip if he so desires to be published by the Bishop Museum in connection with the series of scientific reports to be made later by his staff. That is a matter to take up strictly with him but after it is taken up a written memorandum should be forwarded to me requesting this work to be done by you in order that it can be properly arranged here.

As has been decided in conference you should salt and send in flat skins of all of the larger birds only making up the peculiar small land species and possibly a few of the smaller sea birds. Owing to the difficulty of getting to and from the ship on these islands it will greatly facilitate the work to have the birds prepared in this way and will also save the time of you and your assistants in the field and not necessitate carrying a great amount of field supply such as cotton and other material. No attempt should be made to thoroughly clean the fat from the skins before they are salted, merely roughing off any flesh and gobs of fat so to save as much time as is practicable. Your experience in the field will be a sufficient guide as to this.

Upon your return to Honolulu at the completion of the bird reservation trip should there be time and opportunity, you are instructed to visit convenient localities on any of the larger Hawaiian Islands in order to learn the present condition of the local bird fauna, and to get specimens of such species as may be needed for our collections. Throughout the trip you should keep a careful account of the expenditures made under each of the funds from which expenditures are to be made. While the necessity for securing vouchers of expenditures is waived yet it will be well to secure receipts for expenses of any amounts wherever it can be done conveniently.

With sincere good wishes for your success, I remain

Sincerely yours,


Chief of Bureau.

Copy for Wetmore

February 13, 1923.

Mr. Charles E. Reno,
Biological Assistant,
P. O. Box 765,
Phoenix, Arizona.

Dear Mr. Reno:

You are hereby instructed to proceed to San Francisco, California, where, not later than March 16, you will join Doctor Alexander Wetmore, in charge of the scientific expedition to the Hawaiian Island Bird Reservation. Doctor Wetmore will be in charge of the scientific work of the expedition, including that to be done by yourself. The expedition will cover the islands of the Hawaiian Island Bird Reservation and certain others adjacent thereto. The Navy has detailed a vessel of the mine sweeper class for the purpose of conveying the expedition from Honolulu. The object of the expedition will be to make a scientific survey of the islands visited by Doctor Wetmore and his assistants, and by men representing other branches of science from the Bishop Museum at Honolulu. You are detailed to assist Doctor Wetmore in the collection of birds on the various islands visited. At Laysan Island, however, your work should be devoted first to the extermination of the domestic rabbits which were introduced there some years ago and which have increased until there is danger that they may destroy all of the vegetation on the island and thus cause the extermination of several species of birds. Seventy five ounces of strychnine have been sent you to Phoenix which you should take with you for use on this trip. We will also send fifty ounces more to you by Doctor Wetmore. In San Francisco you should purchase two tons of the best baled alfalfa hay available for use in poisoning the rabbits. In addition at San Francisco you should purchase four single shot .22 rifles and 15,000 rounds of short .22 calibre cartridges for use in killing rabbits. Doctor Wetmore will take with him from here some small headlights to be used if necessary to shoot these animals at night since they are largely nocturnal in habits.

Arrangements for passage and for transportation of supplies from San Francisco have been made on the steamship "Watsonia" of the Matson Line which sails from San Francisco on March 21st. Reservation has been already made for you on this boat. A letter of authorization and allotment covering your expenses will be sent to you later. The "Watsonia" is due in Honolulu March 27th, and it is expected that the expedition will leave that point soon after April 1st. The field work will extend over a period of about three months. Further details will be supplied you by Doctor Wetmore who

will also inform you later where you will meet him at San Francisco.

The destruction of the rabbits on Laysan is a very important matter. The island is about three miles in length by a mile in breadth with a central lagoon occupying a considerable part of the area. I hope you will be able to actually exterminate the last rabbit on the island during the month which can be devoted to that purpose. Failure to do so will be a great disappointment to me and would necessitate another effort at considerable expense. In view of the size of the island, if you consider that two tons of alfalfa are inadequate, you might add one half a tone more, although the landing of baled alfalfa on Laysan may be extremely difficult owing to rough weather. There should, however, be pleasant weather enough so that a little delay would give opportunity to get it ashore safely.

Sincerely yours,

Chief of Bureau.

EMH/ew

Copy for Wetmore

February 13, 1923.

Professor Herbert H. Gregory,
Director, Bishop Museum,
Honolulu, Hawaii.

Dear Professor Gregory:

As you are no doubt already aware, the Secretary of the Navy has approved the detail of a mine-sweeper to leave Honolulu about April first, to convey the scientific expedition to the islands in the Hawaiian Island Bird Reservation and adjacent islands.

A copy is inclosed herewith of the recommendations of the Secretary of Agriculture to the Secretary of the Navy which were approved by the latter with the understanding that the details of the itinerary should be arranged by personal conference with the Commandant of the Naval Station at Pearl Harbor. This, I think, better be undertaken by you and have it as well worked up as possible pending the arrival of Dr. Wetmore, who, as you understand, will be the leader of the expedition as relates to the scientific work, including photography. We are sending as assistant to Dr. Wetmore, an expert in the destruction of rabbits, who is taking a lot of baled alfalfa and poison for the purpose trying to clean up the rabbits on Laysan. He is also carrying some .22 rifles and ammunition to be used in the same work. I do not know whether it will be practicable for him to make an actual clean-up or not, but we shall hope that this will be possible. He certainly can dispose of a very large proportion of the animals, but it may be necessary to repeat the killing another year to make a final cleanup. I am somewhat alarmed over what may be found there, fearing that these animals may have increased to a point that they have practically destroyed all the vegetation on the island, and thus exterminated the few peculiar land birds who use that island as their habitat. Mr. Donald Dickey will accompany the expedition at his own expense to secure moving and still pictures. He may go only to Laysan as he thinks it may be necessary to return promptly to California to have his films developed after his work on Laysan. He should be the only one on the expedition having a moving picture outfit since he will desire to utilize his pictures in public lectures and it would destroy their value if other pictures of the same kind were taken on the trip. Dickey is one of the very best wild life photographers and should get a superb series of pictures which will undoubtedly be seen in all parts of the United States later.

In the inclosed copy of Dr. Wetmore's instructions you will find him designated as in charge of the expedition, and I trust you will make this plan to the scientific staff which accompanies the expedition in order

that arrangements for stopping on islands can be taken up with Doctor Wetmore and through him with the officer in command of the vessel, thus preventing crossing of wires and friction which might otherwise develop. Naturally there will be some conflict of desire on the part of men representing different lines of research, some of the islands attracting part of the men, and having no special interest for others and it will be a matter of give and take, but I trust that everything will go along so amiably that the Navy will be pleased enough with the outcome to take interest in other expeditions of the same character.

As stated in our conference the collection of birds made on the trip will be wholly under the direction of Doctor Wetmore and all specimens will be in his charge. He is instructed to arrange with you to, so far as practicable, fill the gaps in the collection of the Bishop Museum. In this connection I might say that in the case of exceedingly rare species which are necessary for our own collection, that naturally the needs of our collection must necessarily take first place. Doctor Wetmore is instructed to turn over to you the specimens to go to your collection in order that they may be in your hands without delay. Doctor Wetmore will also have charge of the collecting of any mammals on the trip including the Pacific Seal of which I hope he may get a number of specimens. These are very much desired for the collection of the National Museum. Should he find them in sufficient numbers, there will be no objection to one of them being placed in the Bishop Museum, provided you do not have it represented. The collections in other branches of natural history and archaeology will be, of course, wholly the property of the Bishop Museum. Should sufficient duplicates be collected so that any of them could be spared they will be welcomed by the Biological Survey to be transmitted to the National Museum. I hope in this connection that it will be practicable to secure for the National Museum many of the plants and insects of the islands. This will be particularly desirable in view of the fact that Doctor Wetmore will save the stomachs of the birds he collects with a view to having their contents carefully examined here by our experts under the microscope to accurately determine the food of the birds.

When Doctor Wetmore returns to Honolulu at the end of the expedition any way in which you can facilitate a visit by him to some of the least known islands of the group to do a little collecting, will be greatly appreciated.

The Navy has raised the question as to the fuel capacity of the mine-sweeper to cover the expedition, especially the trip to Wake and Johnston Islands and thinks that one or two trips will have to be made back to Honolulu to replenish the supply. This is a matter, of course, to be taken up with the Commandant and I hope that nothing will intervene to prevent the expedition having an opportunity to visit Wake and Johnston Islands, in addition to the islands of the Bird Reservation and some others adjacent thereto.

Should you send Hawaiian boatmen with the expedition to assist in landings, I hope that one of them can be made available as an assistant to

Mr. Donald R. Dickey and at least one with Doctor Wetmore to help in his bird work. A young Hawaiian who is quick to learn and competent with his hands could be very useful in helping skin the large birds and thus relieve the others of a lot of the drudgery incident to saving the skins of the albatrosses and other big species.

I am inclosing herewith a copy of my letter of instructions to Doctor Wetmore which will put you current with the plans of the work from our point of view. I shall appreciate it if you will kindly write me in detail as to the men you plan to send on the expedition representing the different branches of science from the Bishop Museum and any instructions which you give them in order that our files may contain a full record of the plans of the work.

Sincerely yours,

Chief of Bureau.

EWN/ewe

February 12, 1923.

Mr. Charles E. Reno,
Biological Assistant,
P. O. Box 765,
Phoenix, Arizona.

Dear Mr. Reno:

You are hereby instructed to make arrangements to join our expedition to the islands in the Hawaiian Bird Reservation for the purpose of assisting in field work, and in particular, in the extermination of rabbits, which have been introduced on Laysan Island. You will arrange to arrive in San Francisco, California, on or about March 16, 1923, where you will report to Dr. Alexander Wetmore of this Bureau, who will have charge of the scientific work of the expedition including that which will be carried on by yourself.

It is planned to visit a series of islands west of the main Hawaiian group, beginning at Nihoa and continuing as far out as Midway with side trips to Wake and Johnston Islands. Travel will be performed on a thousand ton mine sweeper to be supplied by the navy. At the various points visited natural history collections will be made by representatives of the Burnese Pauahi Bishop Museum of Honolulu and by representatives of this Bureau. You are detailed to assist Dr. Wetmore in the collecting of birds on the various islands visited. On Laysan Island you will devote your entire attention to the problem of the extermination of rabbits, which have been introduced there, and which according to reports have increased until they threaten to eat off all vegetation and so spoil the island as a breeding place for sea birds. Laysan Island is low and sandy, and is about three miles long and a mile wide, with a considerable area at one end occupied by a lagoon. The flora consists of various shrubs, grass, and herbaceous plants.

We have arranged to have to have 75 ounces of strychnine sent to you directly at Phoenix for use on this trip. You will find it necessary to arrange in San Francisco for the purchase and transportation of from one to two tons of best grade baled alfalfa for use in poison operations. In addition you will need to purchase at least two single shot 22 rifles and perhaps twelve thousand or fifteen thousand rounds of 22 caliber ammunition for use in killing rabbits. Other measures for the extermination of these animals will probably suggest themselves to you and can be arranged for.

Mr. C. E. R. ...2.

Arrangements are being made for passage from San Francisco in the steamship Matsonia of the Matson line, to sail on March 21. Reservation has been made for you on this boat and will be paid for under Dr. Wetmore's letter of authorization. A letter of authorization and allotment covering your expenses will be sent to you a little later. The Matsonia is due in Honolulu, March 27, and a start for the islands in question will be made from there about April 1. The field work will extend over a period of about three months. Further details regarding the expedition will be supplied you by Dr. Wetmore.

Very truly yours,

AW:EMJ

Chief of Bureau.

Copy for Wetmore

February 12, 1923.

Dr. L. C. Sanford,
Health Department,
Yale University,
New Haven, Connecticut.

Dear Sanford:

I should have written you before this, but have waited until the details of the Hawaiian Island expedition were worked out and the expedition itself definitely provided for.

You will see by the accompanying carbon of my letter to Murphy that the Secretary of the Navy has approved the detail of a boat for the use of the expedition and that the itinerary and other details of the expedition are to be worked out personally by the commandant of the naval station at Pearl Harbor. Wetmore will have two assistants from the United States and I hope will be able to utilize the assistance of one or more men from Honolulu, so that he can secure a large collection. As I stated in my letter to Murphy every effort will be made to fill, so far as practicable, the set desired for the reserved series of birds for the American Museum, and the additional specimens listed, so far as can be done without handicapping the needs of securing a proper representation for our collection. There is a bare possibility that a few specimens may go to another institution, should it pay the salary of one of Wetmore's assistants. I will let you know about this, and if this is the case, the representation going there will be comparatively insignificant in numbers and will have no practical bearing on the set of specimens we will obtain for you.

I am sending you herewith also a carbon copy of my instructions to Wetmore, so that you will have in mind what we are going to do. Your specimens and those of our collection will come to Washington together and the division be made here.

Wetmore and I have figured out the cost of the expedition including salaries and expenses and find that it will somewhat exceed \$6,000. This is considerably more than we expected to begin with and will crowd us to take care of, but we desire to do the work in a satisfactory way and to have assistants enough to secure the desired series of bird skins.

While your contribution covers about one fifth of the total expenditure, it is a very important element in covering the cost of the work.

I appreciate the fact that the call for this contribution came at an embarrassing time and that you met the call at some personal inconvenience. I trust that the results may be so satisfactory that you will be pleased at having participated. Wetmore plans to leave Washington March 8, sailing from San Francisco the 21st. The naval boat has been ordered to be ready to sail with the expedition about April 1st.

I am planning to leave for Florida sometime after the middle of the week. I can not tell just what date. Hope to see you down there.

Sincerely yours,

T
Chief of Bureau.

EWN/ewe

Copy for
Wetmore

February 12, 1923.

Dr. R. C. Murphy,
American Museum of Natural History,
New York City.

Dear Doctor Murphy:

Your letter of January 30, regarding the proposed scientific expedition to the islands of the Hawaiian bird reservation and vicinity, was received some time ago, but I have delayed replying until we had definitely completed the arrangements.

It will interest you to know that the Secretary of the Navy has approved the detail of a mine-sweeper from the Pearl Harbor Naval Station to carry the expedition. Wake and Johnston Islands were included in the request as points desirable to be included in the expedition. The Navy Department was a little doubtful about the fuel capacity of the mine-sweepers to cover as extended a voyage as that, with incidental delays, but is leaving the matter to be arranged in personal conference with the Commandant of the Naval Station at Pearl Harbor. As Professor Gregory found him much interested in the expedition and evidently friendly to its purposes, I anticipate no serious difficulty in the way.

Every effort will be made to fill your specific list of desiderata from the islands as set forth in detail. As was understood in our conference in New York, the matter of securing specimens in addition to those listed as needed for the reserve series of the American Museum will depend on the time and ability of Dr. Wetmore and his assistants to secure and make up the material, in addition to getting specimens to meet the requirements of the Biological Survey series and the comparatively few needed to complete the representation of the species of the Bishop Museum. There appears to have been a misunderstanding on your part as to the division of the specimens which might be obtained by Dr. Wetmore in case he had opportunity to visit some of the principal islands after the bird expedition is completed. I informed Dr. Sanford that if Dr. Wetmore got sufficient material some would be added to the specified list, but I did not intend to convey the idea that the results of this side-trip of Dr. Wetmore's, which is rather in the way of a personal venture on his part, would be divided half and half.

In connection with the contribution of \$1200 made by Dr. Sanford toward the expedition, I may add that Dr. Wetmore will take with him two assistants from the United States and will try to have another one added at Honolulu. At any rate we hope that he will have the help of some of the native boatmen that it is planned to take along. We figure that the

cost of the entire expedition covering the salaries and expenses of Dr. Wetmore and his two assistants to and from the United States will amount to a total of something more than \$6,000, of which Dr. Sanford's contribution amounts to about one-fifth.

I trust that while there Dr. Wetmore will be able to secure enough immature young and eggs of the species so that a portion of them can be allotted to the American Museum. Every effort will be made to provide a thoroughly good return for the \$1,200 contributed. The National Research Council has placed in my hands its contribution of \$600 to help defray the expenses. The Navy Department has directed the Commandant of the Navy Yard to have the boat ready to leave Honolulu very early in April. Dr. Wetmore and assistants will leave for San Francisco about the 15th of March.

I have mentioned to Dr. Wetmore the desirability of his going to New York, especially to learn what he can from you concerning the collection of Tubinares in which work you can undoubtedly give him some valuable suggestions.

I plan to write Dr. Sanford a personal letter very soon and will inclose with it a copy of this letter so he will have it for reference.

Sincerely yours,

Chief of Bureau.

EWS/ewe

U. S. DEPARTMENT OF AGRICULTURE,

OFFICE OF THE SECRETARY,

WASHINGTON, D. C.

BUREAU OF BIOLOGICAL SURVEY
RECEIVED
(M) FEB 13 1923

TELEGRAM.

42wus 304 p 11 collect

Referred to

For signature of

MD SanFrancisco Calif 1128 A Feb 12, 1923

E. W. Nelson,
Bio. Survey,
Washington, D.C.

Have ample space take care all offerings matsonia twenty first

Matson Navigation Co.

Before filing, show letter

to *Dr. Alexander Wetmore*

February 10, 1923.

Mr. Donald R. Dickey,
514 Lester Avenue,
Pasadena, California.

Dear Mr. Dickey:

The Biological Survey-Bishop Museum scientific-survey expedition to the Hawaiian Island Bird Reservation has now been arranged and the Navy Department has directed the commandant of the Pearl Harbor Naval Station to provide a mine sweeper to convey the party to the various islands in and adjacent to the reservation, including Laysan.

As already arranged between us in personal conference, you will accompany the expedition at your own expense for the purpose of securing a series of moving and still pictures illustrating the bird life and other matters of interest. In return for the opportunity of making the expedition it has been agreed that you supply free of cost to the Biological Survey a copy of your edited moving-picture films of the trip and of the bird life, and copies of such still pictures as may be desired by the Bureau to supplement those taken by its own representatives. The copy of the moving-picture films will be used for official purposes, but not commercially. The still pictures will be used for the purpose of illustrating official reports of the expedition or for other official purposes. The original films and negatives are to remain your personal property.

Every effort will be made to provide necessary assistance to handle your camera and equipment when on and off the ship leaving the Hawaiian Islands. Dr. Alexander Wetmore, of the Biological Survey, will be at the head of the scientific expedition and you should arrange through him for the necessary facilities for your work. Doctor Wetmore will be instructed to do everything in his power to make your work successful.

I understand that on the boat supplied by the Navy Department for the expedition there will be a mess charge for each member of the expedition amounting to somewhere from \$1 to \$1.50 a day. So far as I am aware the only other expense attending the trip from Honolulu to the islands will be possibly tips for personal services. I shall recommend in my letter to Professor Gregory and to Doctor Wetmore that effort be made to arrange for one of the Kanakas it is planned to take as boatmen to be detailed to assist you, if practicable.

In view of the possible necessity of getting your films from Laysan back to be developed at the earliest practicable time, you will of course be at liberty to return from Laysan whenever you consider it necessary and the return of a boat to Honolulu renders it practicable.

I look forward to your securing a superb lot of pictures not only of the bird life but illustrating the characteristics of various islands and other features of general interest that may be encountered.

Please acknowledge receipt of this at your early convenience.

With sincerest good wishes for a successful trip, I remain

Very truly yours,

Chief of Bureau.

EWN:TEJ

Copy for Dr. Wetmore

Op-13A
23777-95:1

8 February 1923.

From: Chief of Naval Operations.
To: Commandant, 14th Naval District.

SUBJECT: Bird Survey of Hawaiian Islands.

1. At the request of the Department of Agriculture, the Navy Department has agreed to supply a mine sweeper from Honolulu to take a party of about twelve through the Hawaiian Islands for a period of about four months, beginning April 1, 1923.

2. The party will be composed of representatives from the Department of Agriculture and from the Bishop Museum of Honolulu.

3. In addition to the Islands contained in the so-called Bird Reservation, the party has expressed a desire to visit Midway, Wake and Johnston Islands. The Agriculture Department has been informed that the actual schedule for the trip must be arranged with the Commandant of the 14th Naval District. Due to the water and fuel conditions, it may be necessary to have the original mine sweeper relieved by another, or even by a light minelayer before the survey is completed, and such a procedure is authorized in advance. There is ample fuel available for the present fiscal year, and consequently the trip of the party should not be curtailed in any way on account of fuel. The Department desires that the Commandant cooperate in every way possible with the party, and it is understood that Professor Gregory will be authorized by the Department of Agriculture to arrange all details.

(Signed) A. H. Robertson
Acting.

COPY

Copy for C. H. Peterson

THE SECRETARY OF THE NAVY
Washington

23777-95:1

Feb. 5, 1923.

My dear Mr. Secretary:

I have your letter of February 1, 1923, in which you request that a mine sweeper at Honolulu be placed at the disposal of a party arranged by the Bureau of Biological Survey of the Department of Agriculture for certain work among the Hawaiian Islands beginning April 1, 1923.

The Navy Department stands ready to direct the Commandant of the Naval Station at Pearl Harbor to assign one of his mine sweepers subject to a schedule to be arranged with that officer. In previous correspondence the vessel was requested in connection with a survey of the bird reservation. The present request of February 1st includes Midway and Wake Island, and in view of the fact that a round trip to Wake Island will involve nearly 4,000 miles of steaming for a mine sweeper, the schedule must be arranged with the Commandant.

It is understood that Professor Gregory of the Bishop Museum of Honolulu has already interviewed the Commandant regarding the use of a mine sweeper for the purpose requested, and the limitations of the mine sweeper as to accommodations are well known.

By other correspondence information is requested of the Navy Department as to whether a transport between San Francisco and Honolulu would be available to carry certain members of the party from San Francisco to Honolulu. This matter has been taken up by representatives of the Department of Agriculture with the Navy Department, and it is understood that no transport is available. Representatives of the Department of Agriculture were informed, however, that transportation might be offered for three members of the party from San Diego or San Pedro to Honolulu about March 1st. Should this transportation be desired, it is requested that prompt information be furnished in order that arrangements may be made.

Respectfully,

(Signed) Edwin Denby.

Hon. Henry C. Wallace,

Secretary of Agriculture.

COPY

Copy for Dr. Wetmore

C O P Y

B1 - S
Hawaii

February 1, 1923.

The Honorable,

The Secretary of the Navy.

Dear Mr. Secretary:

The Department of Agriculture, through the Bureau of Biological Survey, administers the Hawaiian Island Bird Reservation, which includes a series of islands extending in a generally northwestern direction from Honolulu, as indicated on the accompanying map.

For a number of years great need has existed for a comprehensive survey of these islands to secure more definite information concerning them and the present condition of the bird life on them than we now have. Similar information is extremely desirable from neighboring outlying islands, the bird life and other characteristics of which are closely related to those of the islands within the reservation limits. Among these small islands it is desirable to examine are especially Midway, Wake and Johnston.

The expedition is mainly for the purpose of supplying the Department of Agriculture with official information concerning the islands in the bird reservation under its jurisdiction and those adjacent thereto. Fortunately it is possible to have the cooperation of the Bishop Museum, of Honolulu, through its director, Professor H. E. Gregory, of the Department of Geology, Yale University. In addition to the ornithological expert of the Biological Survey, who would be in charge of the scientific work, the Bishop Museum would supply scientific experts to cover the botany, geology, entomology, and other branches of science which it is considered desirable to cover in

such an expedition. The information thus obtained would form the basis for comprehensive publications on the islands, thus making available a large amount of information concerning their characteristics from many points of view which is not now available.

The expedition would be accompanied by a skilled photographer and a full record of the work on the islands will be made in the form of moving and still pictures, thus furnishing material for illustrations of the published reports and for public lectures on that little known region.

The opportunity is such an unusual one to secure at a minimum of expense such a great amount of information from these remote islands which will be valuable to the Department of Agriculture and to other departments of the Government, that I am writing to ask your approval that one of the mine sweepers of the Bird class now at Pearl Harbor Naval Station, with accommodations for from eight to twelve scientists, be detailed to take the expedition to the various islands for the purpose of carrying out the proposed exploration. It is desired that the work be undertaken the first of April and extend through the following three or four months, which I believe cover the most favorable period for weather conditions in that region.

I am informed that Professor Gregory has already discussed the possibility of such an expedition with the commandant at Pearl Harbor, who considers that it would result in the accumulation of considerable information valuable for the use of the Navy.

I trust that you may find it practicable to make the detail of the mine sweeper as suggested, and that arrangements can be made whereby members of the scientific staff and their assistants pay the usual subsistence charge

on the boat, and that the other ordinary expenses will be borne by the Navy Department. The cooperation of the Navy Department in this expedition will be very high appreciated.

Sincerely yours,

(sgd) Henry C. Wallace.

Secretary.

EWN:TEJ

August 4, 1922.

Professor Herbert E. Gregory,
Director, Bishop Museum,
Honolulu, Hawaii.

Dear Professor Gregory:

I am very glad indeed to receive your two letters of July 8, concerning the proposed biological survey of the Hawaiian Bird Reservation. It is fine that there is an appropriate boat now at Pearl Harbor. It is also very gratifying that Admiral Simpson sympathizes with the project as that will facilitate matters very much indeed.

You mention the fact that the wages and subsistence of the Hawaiian members of the crew could probably not be met by payment from Navy funds and state that that will not be very serious as they could probably be obtained for three months' work for less than \$2,000. I hope you know where the \$2,000 are coming from. You are no doubt aware that the funds of the Biological Survey are appropriated for specific purposes and we will be put to it to carry our end of the work with some help from friends from the outside. However, this is one of the many matters connected with the plan which are to be worked out when you are here in October. I shall be very glad indeed to see you and the entire matter will be then disposed of. It looks as though we might work out a most successful project.

In connection with the work within the lines of the reservation I would like to call your attention the possibility of carrying it to adjacent islands, if there are any which need work within a reasonable distance. When the boat is in commission and is conducting the work it might be feasible, at exceedingly small additional expense, to take in a few other islands. This is a matter for consideration when you are here, and if you think it practicable we could take it up with Colonel Roosevelt. At the present time, of course, I do not think it would be good policy to make such suggestions to the Navy Department until we have all of our plans very definitely in hand.

Sincerely yours,

EWN:HL.

Chief of Bureau.

Boat mentioned is a mine sweeper of the "Bird" class.
Gregory considers it large enough to house 10-12 scientific men

January 19, 1923.

MEMORANDUM FOR DR. NELSON.

Dear Dr. Nelson:

Lists of the breeding birds of Laysan Island and the other bird islands of the group are given on the following pages. Of these species Pterodroma hypoleuca breeds in January; the two Albatrosses and Oceanodroma tristrami in February and March; Sterna fuscata and Porzanula palmeri in May and June; Himatione fraithii, Telespyza cantans, and Tatare familiaris, chiefly in May; and the remaining species from March to July. The height of the breeding season for most of the species on Laysan Island is the month of May.

Other islands concerning the bird life of which little or nothing is known, are: Pearl and Hermes Reef; Two Brothers Reef; Ocean Island; Cure Island; and Patrocinio (or Byer) Island.

Very truly yours,

Harry C. Oberholser,

Assistant Biologist.

Breeding Birds of Laysan Island.

	No. of specimens in Biological Survey.	No. of additional specimens desired.
<i>Sterna fuscata</i>	10	35
<i>Sterna lunata</i>	10	35
<i>Anous stolidus pileatus</i>	19	25
<i>Megalopterus hawaiiensis</i>	15	30
<i>Gygis alba kittlitzi</i>	2	25
<i>Diomedea immutabilis</i>	12	30
<i>Phoebastria nigripes</i>	9	30
<i>Thyellodroma pacifica</i>	6	40
<i>Puffinus nativitatis</i>	19	25
<i>Pterodroma hypoleuca</i>	28	20
<i>Bulweria bulweri</i>	6	35
<i>Oceanodroma tristrami</i>	11	40
<i>Scaeophaethon rubricaudus rothschildi</i>	7	35
<i>Sula dactylatra</i>	4	20
<i>Sula piscator</i>	4	20
<i>Fregata aquila palmerstoni</i>	10	35
* <i>Horizonetta laysanensis</i>	1	15
* <i>Porzanula palmeri</i>	26	25
* <i>Himatione fraithii</i>	12	35
* <i>Telespiza cantans</i>	16	40
* <i>Tatara familiaris</i>	2	25

*Endemic

Breeding Birds of Necker Island.
(No endemic species known)

	No. of specimens in Biological Survey.	No. of additional specimens desired.
<i>Sterna fuscata</i>		
<i>Sterna lunata</i>		
<i>Procelsterna saxatilis</i>	4	40
<i>Anous stolidus pileatus</i>		
<i>Megalopterus hawaiiensis</i>		
<i>Gygis alba kittlitzi</i>		
<i>Diomedea immutabilis</i>		
<i>Phoebastria nigripes</i>		
<i>Thyellodroma pacifica</i>		
<i>Bulweria bulweri</i>		
<i>Scaeophaethon rubricaudus rothschildi</i>		
<i>Sula dactylatra</i>		
<i>Sula piscator</i>		
<i>Sula leucogastris</i>		
<i>Fregata aquila palmerstoni</i>		

Breeding Birds of Bird (Nihoa) Island.

<i>Sterna fuscata</i>
<i>Sterna lunata</i>
<i>Procelsterna saxatilis</i>
<i>Anous stolidus pileatus</i>
<i>Megalopterus hawaiiensis</i>
<i>Gygis alba kittlitzi</i>
<i>Diomedea immutabilis</i>

Phoebastria nigripes

Thyellodroma pacifica

Puffinus nativitatis

Bulweria bulweri

Scaeophaethon rubricaudus rothschildi

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Telespyza ultima (peculiar to this island) no specimens in Biological Survey;
35 desired.

Breeding Birds of Lisiansky Island.
(No endemic species known).

Sterna fuscata

Sterna lunata

Megalopterus hawaiiensis

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Thyellodroma pacifica

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of French Frigate Shoals.
(No endemic species known).

Sterna fuscata

Sterna lunata

Procelsterna saxatilis

Anous stolidus pileatus

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Thyellodroma pacifica

Bulweria bulweri

Puffinus nativitatis

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of Gardner Island.
(No endemic species known).

Sterna lunata

Gygis alba kittlitzi

Diomedea immutabilis

Thyellodroma pacifica

Puffinus nativitatis

Scaeophaethon rubricaudus rothschildi

Fregata aquila palmerstoni

Breeding Birds of Midway Island.
(No endemic species known).

Megalopterus hawaiiensis

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Scaeophaethon rubricaudus rothschildi

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

January 19, 1923.

MEMORANDUM FOR DR. NELSON.

Dear Dr. Nelson:

Lists of the breeding birds of Laysan Island and the other bird islands of the group are given on the following pages. Of these species Pterodroma hypoleuca breeds in January; the two Albatrosses and Oceanodroma tristrami in February and March; Sterna fuscata and Porzana palmeri in May and June; Minatona fraithii, Telespyza cantans, and Tatara familiaris, chiefly in May; and the remaining species from March to July. The height of the breeding season for most of the species on Laysan Island is the month of May.

Other islands concerning the bird life of which little or nothing is known, are: Pearl and Hermes Reef; Two Brothers Reef; Ocean Island; Cure Island, and Patrocinio (or Byer) Island.

Very truly yours,

Harry C. Oberholser,
Assistant Biologist.

Breeding Birds of Laysan Island.

	No. of specimens in Biological Survey. + Nat. Mus. (Latter added in ink)	No. of additional specimens desired.
<i>Sterna fuscata</i>	10 + 2	35
<i>Sterna lunata</i>	10	35
<i>Anous stolidus pileatus</i>	19 + 4	25
<i>Megalopterus hawaiiensis</i>	15	30
<i>Gygis alba kittlitzii</i>	2 + 6	25
<i>Diomedea immutabilis</i>	12 + 4	30
<i>Phoebastria nigripes</i>	9 + 1	30
<i>Thyellodroma pacifica</i> = <i>cinnamomea</i>	6	40
<i>Puffinus nativitatis</i>	19 + 2	25
<i>Pterodroma hypoleuca</i>	28 + 3	20
<i>Bulweria bulweri</i>	6	35
<i>Oceanodroma tristrani</i>	11 + 1	40
<i>Scelophaethon rubricaudus rothschildi</i>	7 + 1	35
<i>Sula dactylatra</i> = <i>cyanopectus</i>	4	20
<i>Sula piscator</i>	4	20
<i>Fregata aquila palmerstoni</i>	10	35
<i>Horizonetta laysanensis</i>	1 + 3	15
<i>Porzana palmeri</i>	26 + 7	25
<i>Himatione fraithii</i>	12 + 6	35
<i>Telespiza cantans</i>	16 + 12	40
<i>Tatara familiaris</i>	2 + 6	25

*Endemic

Breeding Birds of Necker Island.
(No endemic species known)

	No. of specimens in Biological Survey. & Nat. Mus. (Oats added in ink)	No. of additional specimens desired.
<i>Sterna fuscata</i>	1	
<i>Sterna lunata</i>		
<i>Procelsterna saxatilis</i>	4 + 4	40
<i>Anous stolidus pileatus</i>		
<i>Megalopterus hawaiiensis</i>		
<i>Gygis alba kittlitzii</i>		
<i>Diomedea immutabilis</i>		
<i>Phoebastria nigripes</i>		
<i>Thyelodroma pacifica</i>		
<i>Bulweria bulweri</i>	7	
<i>Scolecophætho rubricaudus rothschildi</i>		
<i>Sula dactylatra</i>		
<i>Sula piscator</i>		
<i>Sula leucogastris</i>		
<i>Fregata aquila palmerstoni</i>	1	

Breeding Birds of Bird (Nihoa) Island.

<i>Sterna fuscata</i>
<i>Sterna lunata</i>
<i>Procelsterna saxatilis</i>
<i>Anous stolidus pileatus</i>
<i>Megalopterus hawaiiensis</i>
<i>Gygis alba kittlitzii</i>
<i>Diomedea immutabilis</i>

Phaethastria nigripes

Thyelodroma pacifica

Puffinus nativitatis

Bulweria bulweri

Scoephaethon rubricaudus rothschildi

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Telespyza ultima (peculiar to this island) no specimens in Biological Survey;
35 desired.

Breeding Birds of Lisiansky Island.
(No endemic species known).

Sterna fuscata

Sterna lunata

Megaloptyx hawaiiensis

Gygis alba kittlitzii

Diomedea immutabilis

Phaethastria nigripes

Thyelodroma pacifica

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of French Frigate Shoals.
(No endemic species known).

Sterna fuscata

Sterna lunata

Procelsterna saxatilis

Anous stolidus pileatus

Gygis alba kittlitzii

Dionedea immutabilis

Phoebastria nigripes

Thyelodroma pacifica

Bulweria bulweri

Puffinus nativitatis

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of Gardner Island.
(No endemic species known).

Sterna lunata

Gygis alba kittlitzii

Dionedea immutabilis

Thyelodroma pacifica

Puffinus nativitatis

Sceloporus rubricaudus rothschildi

Fregata aquila palmerstoni

Breeding Birds of Midway Island.
(No endemic species known).

Megalopterus hawaiiensis

Gygis alba kittlitzii

Dianodes immutabilis

Phaethastria nigripes

Scelophaeston rubricaudus rothschildi

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

BOND

KNOW ALL MEN BY THESE PRESENTS, That we **Alexander Wetmore**
, of the **Wash. D.C.** , as Principal,
and **THE FIDELITY & CASUALTY COMPANY OF NEW YORK**

, as Surety*, are held and firmly bound unto
the United States of America in the full and just sum of ONE
THOUSAND DOLLARS (\$1,000.00), lawful money of the United
States, for which payment, well and truly to be made to the United
States, we bind ourselves, jointly and severally, our and each of our
joint and several heirs, executors and administrators, successors and
assigns, firmly by these presents:

Sealed with our seals and dated this **ELEVENTH** day of
AUGUST , in the year one thousand nine hundred
and **TWENTY-TWO.**

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, That whereas
Alexander Wetmore , an employee of the United
States Department of Agriculture, hath under the provisions of the Act
of June 3, 1902 (32 Stat., 303) applied to the Secretary of Agriculture
of the United States for advancements of public moneys of the United
States, to be used and applied by him in the payment of traveling and
other necessary expenses legally authorized to be incurred by him in
the prosecution of the business of the United States Department of
Agriculture,

NOW, THEREFORE, if the said **Alexander Wetmore**
shall expend such moneys as may have been or which may hereafter be ad-
vanced to him by the said Secretary of Agriculture, from time to time,
in payment of traveling and other necessary expenses legally authorized
to be incurred by him in the prosecution of the business of the United
States Department of Agriculture as aforesaid, and shall well and truly
make an accounting of all moneys so expended by him according to the
Fiscal Regulations of the United States Department of Agriculture and
according to the laws of the United States, and shall at the end of
each trip or upon demand by the Disbursing Clerk of the United States
Department of Agriculture, promptly repay the unexpended moneys re-
maining in his possession to the said Disbursing Clerk, then this ob-
ligation to be void and of no effect; otherwise to be and remain in
full force and virtue.

Signed, sealed, and delivered
in presence of:

Charles E. Paine

Alexander Wetmore (L.S.)
Principal.

J. A. Gifford
(Corporate Seal)

THE FIDELITY & CASUALTY COMPANY
OF NEW YORK

By *Henry C. Davis*
Surety. Attorney.

Approved:

AUG 16 1922

Clifford
Acting Secretary of Agriculture.

The rate of premium on this bond is \$ **5.00 (min)** per thousand;
and the total amount of premium charged is \$ **5.00**.

*Note. To avoid delay the employee should ascertain that the surety
company named holds a certificate of authority from the Secretary of
the Treasury under the Acts of Congress of August 13, 1894, and March
23, 1910, as acceptable sureties on Federal bonds.

May 4, 1922.

MEMORANDUM FOR DR. NELSON.

Dear Dr. Nelson:

Lists of the breeding birds of Laysan Island and the other bird islands of the Hawaiian Islands Reservation are given on the following pages. Of these species Pterodroma hypoleuca breeds in January; the two Albatrosses and Oceanodroma tristrani in February and March; Sterna fuscata and Porzanula palmeri in May and June; Himatione fraithii, Telespyza cantans, and Tatare familiaris, chiefly in May; and the remaining species from March to July. The height of the breeding season for most of the species on Laysan Island is the month of May.

Very truly yours,

Harry C. Oberholser,

Assistant Biologist.

Breeding Birds of Laysan Island.

	No. of specimens in Biological Survey.	No. of additional specimens desired.
<i>Sterna fuscata</i>	10	35
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<i>Megalopterus hawaiiensis</i>	15	30
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<i>Diomedea immutabilis</i>	12	30
<i>Phoebastria nigripes</i>	9	30
<i>Thyellodroma pacifica</i>	6	40
<i>Puffinus nativitatis</i>	19	25
<i>Pterodroma hypoleuca</i>	28	20
<i>Bulweria bulweri</i>	6	35
<i>Oceanodroma tristrami</i>	11	40
<i>Scaeophaethon rubricaudus rothschildi</i>	7	35
<i>Sula dactylatra</i>	4	20
<i>Sula piscator</i>	4	20
<i>Fregata aquila palmerstoni</i>	10	35
<i>Horizonetta laysanensis</i>	1	15
<i>Porzanula palmeri</i>	26	25
<i>Himatione fraithii</i>	12	35
<i>Telespyza cantans</i>	16	40
<i>Tatara familiaris</i>	2	25

Breeding Birds of Necker Island.

	No. of specimens in Biological Survey.	No. of additional specimens desired.
<i>Sterna fuscata</i>		
<i>Sterna lunata</i>		
<i>Procelsterna saxatilis</i>	4	40
<i>Anous stolidus pileatus</i>		
<i>Megalopterus hawaiiensis</i>		
<i>Gygis alba kittlitzi</i>		
<i>Diomedea immutabilis</i>		
<i>Phoebastria nigripes</i>		
<i>Thyellodroma pacifica</i>		
<i>Bulweria bulweri</i>		
<i>Scaeophaethon rubricaudus rothschildi</i>		
<i>Sula dactylatra</i>		
<i>Sula piscator</i>		
<i>Sula leucogastris</i>		
<i>Fregata aquila palmerstoni</i>		

Breeding Birds of Bird (Nihoa) Island.

<i>Sterna fuscata</i>
<i>Sterna lunata</i>
<i>Procelsterna saxatilis</i>
<i>Anous stolidus pileatus</i>
<i>Megalopterus hawaiiensis</i>
<i>Gygis alba kittlitzi</i>
<i>Diomedea immutabilis</i>

Phoebastria nigripes

Thyellodroma pacifica

Puffinus nativitatis

Bulweria bulweri

Scaeophaethon rubricaudus rothschildi

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Telespyza ultima

Breeding Birds of Lisiansky Island.

Sterna fuscata

Sterna lunata

Megalopterus hawaiiensis

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Thyellodroma pacifica

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of French Frigate Shoals.

Sterna fuscata

Sterna lunata

Procelsterna saxatilis

Anous stolidus pileatus

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Thyellodroma pacifica

Bulweria bulweri

Puffinus nativitatis

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of Gardner Island.

Sterna lunata

Gygis alba kittlitzi

Diomedea immutabilis

Thyellodroma pacifica

Puffinus nativitatis

Scaeophaethon rubricaudus rothschildi

Fregata aquila palmerstoni

May 4, 1922.

MEMORANDUM FOR DR. NELSON.

Dear Dr. Nelson:

Lists of the breeding birds of Laysan Island and the other bird islands of the Hawaiian Islands Reservation are given on the following pages. Of these species Pterodroma hypoleuca breeds in January; the two Albatrosses and Oceanodroma tristrani in February and March; Sterna fuscata and Porzana palmeri in May and June; Himatione fraithii, Telespyza cantans, and Tatara familiaris, chiefly in May; and the remaining species from March to July. The height of the breeding season for most of the species on Laysan Island is the month of May.

Very truly yours,

H. C. O.

Assistant Biologist.

Breeding Birds of Laysan Island.

	No. of specimens in Biological Survey.	No. of additional specimens desired.
<i>Sterna fuscata</i>	10	35
<i>Sterna lunata</i>	10	35
<i>Anous stolidus pileatus</i>	19	25
<i>Megalopterus hawaiiensis</i>	15	30
<i>Gygis alba kittlitzii</i>	2	25
<i>Diomedea immutabilis</i>	12	30
<i>Phoebastria nigripes</i>	9	30
<i>Thyellodroma pacifica</i>	6	40
<i>Puffinus nativitatis</i>	19	25
<i>Pterodroma hypoleuca</i>	28	20
<i>Bulweria bulweri</i>	6	35
<i>Oceanodroma tristrami</i>	11	40
<i>Scolecophæthron rubricaudus rothschildi</i>	7	35
<i>Sula dactylatra</i>	4	20
<i>Sula piscator</i>	4	20
<i>Fregata aquila palmerstoni</i>	10	35
<i>Horizonetta laysanensis</i>	1	15
<i>Porzanula palmeri</i>	26	25
<i>Himatione fraithii</i>	12	35
<i>Telespyza cantans</i>	16	40
<i>Tatara familiaris</i>	2	25

Breeding Birds of Necker Island.

	No. of specimens in Biological Survey.	No. of additional specimens desired.
<i>Sterna fuscata</i>		
<i>Sterna lunata</i>		
<i>Procelsterna saxatilis</i>	4	40
<i>Anous stolidus pileatus</i>		
<i>Megalopterus hawaiiensis</i>		
<i>Gygis alba kittlitzii</i>		
<i>Diomedea immutabilis</i>		
<i>Phoebastria nigripes</i>		
<i>Thyelodroma pacifica</i>		
<i>Bulweria bulweri</i>		
<i>Scaeophaethon rubricaudus rothschildi</i>		
<i>Sula dactylatra</i>		
<i>Sula piscator</i>		
<i>Sula leucogastris</i>		
<i>Fregata aquila palmerstoni</i>		

Breeding Birds of Bird (Nihoa) Island.

<i>Sterna fuscata</i>
<i>Sterna lunata</i>
<i>Procelsterna saxatilis</i>
<i>Anous stolidus pileatus</i>
<i>Megalopterus hawaiiensis</i>
<i>Gygis alba kittlitzii</i>
<i>Diomedea immutabilis</i>

Phoebastria nigripes

Thyellodroma pacifica

Puffinus nativitatis

Bulweria bulweri

Scelophaethon rubricaudus rothschildi

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Telespyza ultima

Breeding Birds of Lisiansky Island.

Sterna fuscata

Sterna lunata

Megalopterus hawaiiensis

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Thyellodroma pacifica

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of French Frigate Shoals.

Sterna fuscata

Sterna lunata

Procelsterna saxatilis

Anous stolidus pileatus

Gygis alba kittlitzi

Diomedea immutabilis

Phoebastria nigripes

Thyellodroma pacifica

Bulweria bulweri

Puffinus nativitatis

Sula dactylatra

Sula piscator

Sula leucogastris

Fregata aquila palmerstoni

Breeding Birds of Gardner Island.

Sterna lunata

Gygis alba kittlitzi

Diomedea immutabilis

Thyellodroma pacifica

Puffinus nativitatis

Scaeophaethon rubricaudus rothschildi

Fregata aquila palmerstoni

WANT LIST

A. Wetmore - Tanager.

- ☒ 1. Table salt, in 5 or 10 lb. cloth bags *Ship* 200 lbs.
- ☒ 2. Cornmeal (white or yellow) in 5 or 10 lb. cloth bags *Ship* 150 lbs.
- ☒ 3. Cotton, good grade, in bats 6 lbs.
- B* 4. Kodak films #118, $3\frac{1}{2}$ x $4\frac{1}{4}$, 4 doz. rolls, 6 exposure non autographic, in sealed tins. 6 exposure not available, send 2 doz. rolls 12 exposure
- ☒ 5. Empty cigar boxes 2 doz.
- 7* ☒ 6. Newspapers for packing, bundle 2 feet thick at least *Mr. Thurston is bringing more.*
(These can probably be secured at the Blaisdell.)
- ☒ 7. Tooth paste, Kolynos, 3 tubes.
- G* 8. A small oven for #62 New Perfection oil stove; can be purchased at E. O. Hall's.
- B* 9. 2 Good-sized enamel ware wash basins.
- 7* ☒ 10. Repairs to spectacles (sent with Com. King)
- B* 11. Development of film (sent with Com. King), with one print of each negative. Wish if possible to have these sent back when Tanager returns. Instructions to photographer are enclosed in box of film: "Please take film to Hawaii Photo Supply Co., corner Fort and Beretania Sts."
- ☒ 12. 10 Large wooden boxes with covers for packing specimens, similar in size to the large ones shipped to Washington herewith. These may be purchased for .25 each from one of the large shoe stores. Strong boxes with tight covers desired.
- G* 13. 2 Cans gun-oil ("Rem-oil" wanted if available.)
- G* 14. 4 lbs. each 6d. 8d. and 10d. wire nails.
- ☒ 15. Mail for Reno and Wetmore.

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